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ABSTRACT

Four major component areas of the Hazard (Kentucky) Educational Region were sampled using questionnaires, tests, and interviews in an effort to assess the effects of a regional career education program. The community component, randomly selected to achieve a five percent representative sample, was examined for major variables associated with the understanding of, and commitment to career education exhibited by members of the community. All teachers who had participated in summer career education workshops (the professional staff development component) were sampled for knowledge of and attitudes toward career education, personal characteristics, and professional characteristics. The student component, group samplings of grades 4, 6, 8, 10, and 11, measured academic achievement, vocational maturity, self concepts, selected attitudes, knowledge of occupations, and motivational levels. All system career education coordinators and a sample of classroom teachers (the management component) were interviewed on goal clarification, support for project personnel, utilization of facilities, materials and human resources, and effective administrative procedures. The extensive findings are presented in table form and discussed at length. The recommendations made relate to the findings concerning each component. A bibliography, some of the instruments used, and sample career education policy statements from local school districts conclude the document. (NH)

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EFFECTS OF A PROGRAM OF CAREER EDUCATION IN KENTUCKY'S EDUCATION REGION XII

Clayton P. Omvig

CE003037

FINAL REPORT

Project Number: V28810-02

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Department of Vocational Education
College of Education
University of Kentucky
Lexington

November, 1974

PREFACE

Presented in this report are the results of a research project designed to assess the effects of a regional Career Education program. Many Career Education programs have been funded in Kentucky and across the nation. However, few of these projects have included a research base.

The purpose of this project was to gather research data to use in evaluating the effects of the project as well as to gather some baseline data prior to implementation of a Career Education program. This evaluation should not be viewed as an effort to praise or condemn the Regional Career Education Staff of the Kentucky Valley Educational Cooperative, but to generate recommendations as to effective and ineffective practices and procedures.

The results of the study can be utilized by the state department of education for planning future Career Education efforts in the Commonwealth, by colleges of education for effecting changes in teacher education programs, and by the Kentucky Valley Educational Cooperative (Region XII) in evaluating their program and in generating recommendations for that program or for generalized recommendations to the state department of education.

Research data were gathered relative to four major components. These include: (1) Community, (2) Professional Staff Development, (3) Student, and (4) Project Management. The findings were presented in four separate chapters, one representing each component.

ACKNOWLEDGEMENTS

Without the support and assistance of the Career Education Staff of the Kentucky Valley Educational Cooperative, a project of this magnitude could not have been undertaken. This staff included: Dr. Elwood Cornett, Cooperative Director; Dr. Owen Collins, Project Director; Gordon Cook; Randolf Wicker; and Bill Burke. A very special thanks is offered to Mr. Bill Burke for his countless hours spent in organizing for and collecting student data.

To members of the Department of Vocational Education who cooperated in the conduct of the study, to Maynard Iverson who directed the Community Component and prepared that chapter of the report, to Bill Stilwell and Phil Nacke who provided assistance in questionnaire construction, and to Rodney Tulloch who assisted in student testing, sincere thanks are extended.

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Finally, to Mrs. Anne Mills, who spent many hours of her own time in typing and duplicating the final report, the project director's deepest appreciation is extended.

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CHAPTER 1

INTRODUCTION

Comprehensive Career Education, parts of which have appeared in education for a century or more, has caught the attention of educators. Career Education is a concept "whose time has arrived." Volumes have been written about it; numerous definitions of it have been formulated; pilot and demonstration projects have been developed, operated, and evaluated; and curricula have been developed or existing curricula modified to incorporate it. This approach to education is one which will be studied more and more in the future. A large investment in time and resources will be made at the local, state, and national levels in an effort to conceptualize more clearly Career Education and to develop models for implementation. Major efforts are already underway to determine if Career Education is a viable concept which should permeate the total educational system.

Credit has been frequently given to former U. S. Commissioner of Education, Sidney P. Marland for proposing Career Education. Marland defined the goals of Career Education as being to help each child who moves through school to increase his familiarity with the world of work and to help him to acquire "the knowledge necessary to obtain meaningful employment upon leaving school."[1] The concept should help students to develop positive attitudes toward work and to expose them to the occupational alternatives from which they might make choices.

Although most people think of Career Education as being relatively new, the foundations of Career Education go back several years. Early in this century several educational philosophers and writers began to expound their views that occupational training, general educational programs, and guidance and counseling activities should be combined in order to provide an effective total educational program for students. Dewey viewed industrial education as a medium which could provide a basis around which students could learn the social and cultural relationships involved in the world of work. Dewey's philosophy was the basis of "Life Adjustment" education, an approach which was intended to eliminate the artificial barriers between school and the world in which people were expected to function. This approach taught problem-solving skills and attempted to help students learn to apply these skills in recurring real-life situations -- the two most persistent situations being the wise use of leisure time and the use of skills and knowledges to earn a living.[2] The Career Education concept embodies much of this type of thought.

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[1] U. S. Office of Education, Career Education, (Washington, D.C.: Government Printing Office, 1971).

Parsons also advocated an integrated approach to education in order to prepare students for life. His influence on vocational guidance was strong and long-lasting. He is credited with founding vocational guidance and his influence was a major factor in getting the public schools to accept guidance and industrial education as integral parts of their programs.[3]

Throughout the war years and the depression which separated them, various federal programs were instituted to give both adults and youth integrated educational programs which would help them gain both some general educational background as well as vocational training. Furthermore, various pieces of federal legislation -- from the Morill Act of 1862 to the 1968 Vocational Amendments --

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[2] Edwin L. Herr, Review and Synthesis of Foundations for Career Education, Preliminary Edition (Columbus, Ohio: ERIC Clearinghouse on Vocational and Technical Education, The Center for Vocational and Technical Education, The Ohio State University, March 1972), pp. 19-20.

[3] Ibid, pp. 17-18.

were addressed to the problem of making people not only employable, but also capable of becoming contributing members of society in general.[4]

The literature of the 1960's and 1970's was filled with references to the fact that piecemeal legislation and programs had not accomplished the objectives of education. What was needed was a total approach to education which would allow all persons to leave the education system with adequate preparation to accept immediate employment or go on to further training. All of this would be infused with programs and activities designed to help all persons make effective decisions, solve problems, and function responsibly in the society. The educational approach which has evolved to meet this challenge is the concept of Career Education.

What is Career Education? As Hoyt points out, Career Education is still an emerging concept and it has numerous designers and numerous proponents with different ideas about how it should be implemented. In the 1973 American Vocational Association Yearbook, he offers 19 "official" definitions of Career Education and several others formulated by prominent writers in the field.[5] He does think that there is general consensus that Career Education is a conscientious effort; that it is essentially a kindergarten through adulthood program for all persons; that it emphasizes education as preparation for a working life including vocational education as an important part, but not making Career Education a synonym for vocational education.[6] Hoyt also detects some areas of disagreement concering Career Education. He summarizes these as (1) disagreements as to the rationale for Career Education, (2) disagreements concerning the long-range goals of Career Education, and (3) disagreements about the control of Career

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[4] Ibid., pp. 17-18.

[5] Kenneth B. Hoyt, "Toward a Definition of Career Education," Career Education, The Third Yearbook of the American Vocational Association, Edited by Joel H. Magisos, (Washington D.C.: American Vocational Association, 1973).

[6] Ibid., p. 20.

Education -- whether it is a totally school-based function or whether the home and community should be involved.[7] Maybe there will never be total agreement in some of these areas, but the disagreements can be largely overcome. What is happening is that local educational agencies and state departments of education are making serious attempts to implement Career Education programs in light of their perceptions about what it is and what it should do. The educational programs of the various states and localities have always differed somewhat and there is no reason to believe that their Career Education programs will not also differ. The basic agreements as to who is to be served and, in general, what is to be done in terms of meeting the needs of people will keep such differences from becoming unsolvable problems.

As with any other new or revised concept in education, the Career Education concept and the questions associated with its implementation reveal a multitude of problems to be solved. This study was an attempt to isolate some of those problems and identify their implications concerning adopting Career Education.

Statement of the Problem

The U. S. Office of Education has established the development and implementation of Career Education models as one of the very few major priority areas. In fact, former U. S. Commissioner of Education, Sidney P. Marland, Jr. labeled Career Education as the major objective of the U. S. Office of Education and suggested that it would be a top priority for the forseeable future.[8]

In Kentucky, the state department of education has also designated the development of Career Education models as a priority item. Six school systems or regions in Kentucky have been operating exemplary or pilot projects in Career Education for two years or longer. A seventh implemented an educational program under the Career Education concept in the fall of 1973. All of these projects have been supported with vocational education funds through the Kentucky Bureau of Vocational Education and/or the U. S. Office of Education.

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[7] Ibid., pp. 20-24.

[8] Sidney P. Marland, Jr. "Career Education 300 Days Later," American Vocational Journal, 47 (February 1972), pp. 14-17.

As a result of the commitment to Career Education exhibited by the state department of education, a real need existed in Kentucky for information on which to base the planning and evaluation of teacher education programs and procedures for implementing Career Education at the local level. Existing programs may have to be modified if Career Education is to operate effectively in Kentucky schools. Swanson points out that Career Education can only be implemented by beginning a massive program of inservice training for elementary and secondary teachers in the public schools.[9] He says that it is necessary to begin simultaneously a flow of adequately trained teachers from the teacher education institutions. Bottoms sees much of the responsibility for effecting implementation and changes in staff development as being that of the state department of education.[10] Career Education must infuse the entire teacher education process which includes the development of positive attitudes toward Career Education.

The importance of the attitudinal component has been pointed out by Hoyt, *et al.*[11] They stress that one essential element in the development of Career Education programs is the attitude of professional educators toward work and education as preparation for work. The implication is that professional educators at the present time do not have desirable attitudes toward these two concepts.

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[9] Gordon I. Swanson, "Career Education: Barriers to Implementation," *American Vocational Journal*, 47 (March 1972), pp. 81-2.

[10] Gene Bottoms, "State Level Management for Career Education," *American Vocational Journal*, 47 (March 1972), pp. 89-92.

[11] Kenneth B. Hoyt *et al.* *Career Education: What It Is and How to Do It*, (Salt Lake City: Olympus Publishing Company, 1972).

Furthermore, these attitudes must be changed if Career Education is to become more than just a new name tacked onto what we are already doing.

Not only must we change the attitudes of professional educators already in the field, but we must drastically change out teacher education programs in the colleges and universities if prospective teachers are to exhibit positive attitudes toward Career Education and possess the necessary competencies to teach in a system which emphasizes the Career Education concept.

There existed then a contrasting state of affairs relative to teacher attitudes toward Career Education. On the one hand, planners and evaluators of pre-service and in-service teacher education programs needed information about the current status of teacher attitudes toward the various aspects of Career Education. On the other hand, there existed no information about teacher attitudes toward Career Education.

One problem undertaken in this study was to ascertain what constitutes an effective Professional Staff Development Component for Career Education, including teacher attitude, school climate, and teacher characteristics.

Another area of concern was the implementation of a Career Education program in the community itself. Minor changes can be made in an educational program and the community may not even be aware that changes have occurred. But, Career Education will not be looked upon as a minor change, for if the program changes affected are to be permanent, community support and commitment will be necessary. Citizen advisory committees will play an important role; public relations will be of utmost importance; and community resources will have to be utilized. Therefore, a second problem which was addressed in the study was, how effective has the Hazard project been in securing community involvement; what should this involvement be; and what procedures were the most effective?

All educational programs should ultimately be evaluated as to their effects on students. A third research problem then was, "what was the effect of a

Career Education program on such student variables as: attitude toward school and others, achievement level, occupational interests, level of occupational aspiration, knowledge about occupations, self-concept, and absenteeism?"

A fourth area for investigation in this study was that of project management. If resources are not properly managed, the prospects of project success are greatly diminished. Therefore, this study also investigated project management, not in an effort to praise or condemn the project staff of the Kentucky Valley Educational Cooperative, but to generate recommendations as to effective and ineffective practices and procedures for optimum utilization of resources.

It was felt that the best approach to answering the research questions outlined above was to separate the project into four phases, each concerned with one of the components of the Hazard Region Career Education project -- the Community, Professional Staff Development, Student, and Project Management components. Each phase of the study was directed toward analyzing the effects of and/or the procedures used to implement Career Education in the Region. The research procedures utilized and the resulting findings are discussed separately for each component.

Variables Active in the Problem

Community Component

Within the Community Component, the major variables which were active were associated with the understanding of, and commitment to Career Education exhibited by members of the community. Demographic variables assumed to be active were sex, educational background, marital status, and number of children in the family.

Professional Staff Development Component

Analyzing the effects of any educational program necessarily involves the consideration of knowledge and attitude factors. Not only must those affected have knowledge of the program, but they must have generally favorable attitudes toward the concept if the program is to approach maximum effectiveness. This is no less true for Career Education as a concept or as a program to be implemented than for other types of educational approaches.

Attitudes toward Career Education exhibited by various segments of the population have been the subject of some recent studies.

Ohamneson conducted a study of the opinions of high school teachers relative to Career Education.[12] His study of a stratified random sample of 900 California teachers was directed initially toward determining if traditional vocational teachers (Agriculture, Home Economics, Industrial Education, and Business and Office Education), general education teachers (Physical Education, Industrial Arts, Music, and Art), and academic teachers (English, Social Science, Foreign Language, Science, and Mathematics) differed in their opinion. He found that there were really only two appropriate groupings -- Industrial Arts teachers responded in a manner similar to traditional vocational teachers and general academic teachers responded similarly. Thus, comparisons were made between two teacher groups: vocational (including Industrial Arts) and non-vocational (comprised of general and academic teachers).

Ohamneson found that there was a significant difference between the two groups with respect to the area of teacher/classroom activities. Vocational teachers indicated that they supported Career Education, were capable of providing it, and were in actuality providing Career Education activities to students. Responses for non-vocational teachers were significantly lower in all three areas -- should be involved, can be involved, and are involved in Career Education activities. The two groups did not differ in their opinions about whether schools should be, were capable of being, and actually were engaged in school/community Career Education. "Teachers agreed that schools were presently failing to respond to the extensive need for school/community Career Education."[13]

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[12] Greg Ohamneson, "High School Teacher Opinions of Career Education," Journal of Industrial Teacher Education II (Spring 1974).

Teachers with four or more years of non-teaching work experience had more favorable opinions of Career Education than those who had less experience. Among non-vocational teachers, those who had prior knowledge of or experiences with Career Education gave greater support to teacher/classroom practices than the "uninformed" ones.

Baker utilized a 30-item Likert-type scale to collect data relative to the attitudes of vocational teachers, academic teachers, and members of the general public toward Career Education.[14] The instrument was administered to 30 vocational teachers (representing the traditional vocational service areas), 21 randomly-selected teachers of academic subjects (such as Mathematics and History), and 26 selected community members (representing the public -- businessmen, professionals, tradesmen, and semi-skilled workers).

The analysis of variance was used to separately analyze the thirty statements. For each individual statement, each of the three groups was considered as a treatment group and a combination of the remaining two groups resulting in three comparisons per statement. When the general public sample was considered as a treatment group, their attitudes differed significantly from the combined group on six items. The public felt that (1) Career Education was already a part of the high school curriculum, (2) the general high school curriculum should be taken by those not planning to go to college, (3) the college preparatory curriculum was the most flexible type of curriculum, (4) vocational education was for low-ability students, (5) the need for vocational education was not increasing, and (6) any student who was capable and able to pay for it should go to college.[15]

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[13] Ibid., p. 20.

[14] G.E. Baker, "Attitudes of Vocational Teachers, Academic Teachers and the General Public Toward Career Education," Journal of Industrial Teacher Education 10 (Fall 1972).

Vocational teachers differed from the combined group of academic teachers and public citizens on two statements. They felt that the need for college education was not increasing, and did not agree that teachers should necessarily encourage their more capable students to attend college. Vocational teachers also differed from the group of public representatives on another statement. Public citizens felt that certain high school courses were required for college entry while vocational teachers felt they were not. Academic teachers also disagreed with the public about college attendance. Where the public felt that capable and financially able students should go to college, the academic teachers expressed significantly less agreement with the statement.[16]

Given the localized nature of the research and the small sample sizes, the results of Baker's study cannot be widely generalized. However, if, as he suggests, there may be reason to hypothesize bias toward various elements of the curriculum (vocational education versus college preparatory), then the influence of such attitudes could affect the success of Career Education programs. If, in fact, such biases are widespread, then much effort would be needed to inform the public and teachers concerning the rationale for Career Education.

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[15] *Ibid.*, p. 26.

[16] *Ibid.*, p. 27.

Professional staff attitudes toward Career Education were indirectly identified in a study conducted recently in Western Kentucky. Harryman directed a project during the 1972-73 school year to analyze the problems encountered in implementing and operating Career Education programs in Kentucky Vocational Region III. The study involved two rounds of interviews with 151 teachers -- one interview at the end of the first semester and the second at the end of the school year.[17]

The interview analysis revealed that the following problems were most frequently encountered:

1. There was not sufficient time for teachers to plan individually or cooperatively for Career Education during the normal school day.
2. There was not enough total faculty involvement so that ideas could be shared and materials developed.
3. Teachers felt that some educational goals and objectives were not embodied within the Career Education concept.
4. Teachers felt frustrated by the lack of a clear and unambigious definition of Career Education and its content.[18]

In addition, teachers in rural areas encountered such problems as:

1. Difficulty in obtaining local citizens to act as resource persons in the classroom.
2. Difficulty in finding suitable locations to visit for field trips.
3. Difficulty in financing transportation for field trips.[19]

Many teachers felt that Career Education was needed but that the attitudes of many others, evidenced by lack of involvement, were causing implementation problems.

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[17] Norman D. Ehresman, M. Eugene Harryman, and Dorothy DeMars, "Analysis of Problems Encountered by Classroom Teachers Associated with their Involvement in the Kentucky Regional Career Education Development Project," (Bowling Green, Kentucky: Western Kentucky University, Office of Educational Research, June 28, 1973).

[18] Ibid., pp. 67-74.

[19] _Ibid._, pp. 67-74.

The importance of attitudes seems to be well-documented in the literature. Knowledge of Career Education was another variable which was active in the problem. Also, several personal and professional characteristics of the teachers were variables which needed to be accounted for in the data collection and analysis. Thus, the major variables within the Professional Staff Development Component were:

1. Knowledge of Career Education
2. Attitude toward Career Education
3. Personal Characteristics
    - Sex
    - Age
4. Professional Characteristics
    - Teaching Experience
    - Grade Level Taught
    - Subject Taught
    - Professional Preparation for Career Education.

Student Component

The literature concerning Career Education is growing rapidly. Much has been written about the historical and philosophical bases for Career Education. Numerous curriculum guides have begun to appear. Descriptions of pilot or demonstration project activities abound. However, reports on the effects of Career Education have not appeared in great quantity. It is expected that such reports will begin to constitute a larger portion of the literature as more and more research and evaluation projects reach completion.

An example of an evaluative research report was identified. The Minnesota Research Coordinating Unit for Vocational Education designed and implemented a comprehensive system of formative and summative evaluation of Career Education projects in the state.[20] The formative evaluation was directed toward assessing the processes used to implement Career Education in seven school districts. The summative evaluation was directed toward the assessment of student outcomes (in terms of cognitive achievement).

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[20] Brandon B. Smith, A System for Evaluating Career Education in Minnesota: 1972-73, Final Report (Minneapolis: University of Minnesota, Minnesota Research Coordinating Unit for Vocational Education, January 1974), pp. 7-10.

A feedback system was implemented as part of the formative evaluation. Project directors and participating teachers provided monthly reports of their activities which related to the implementation of Career Education. Project directors reported the amount and type of support activities they provided. Teachers reported the amount of time spent on various types of Career Education instruction.

The findings from the formative evaluation showed that project directors spent approximately 17% of their time in such Career Education activities as:

(1) Attending and/or making presentations to various meetings at local, state, and national levels.

(2) Preparing and distributing promotional literature about Career Education.

(3) Providing in-service training for teachers.

(4) Purchasing and developing curriculum or instructional material.

(5) Organizing career guidance services.[21]

Teachers spent an average of 2.43% of their time conducting Career Education activities.[22] The teachers used a variety of instructional techniques (most frequently audio-visual presentations, outside resource persons, and career games) to emphasize three major concepts: self-awareness, occupation/industries, and work roles.

The summative evaluation involved the administration of specially-developed tests to assess the impact of Career Education on student achievement. Experimental and control groups were identified and the tests administered. The data analysis revealed that the tests were equally reliable for both experimental and control groups.[23] Reliability coefficients were higher for older age groups. Some differences in achievement were identified between the groups, but the differences were small and not consistently in favor of one group.[24] When the seven Career Education projects were considered alone, no significant differences were detected among grade levels.[25]

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[21] Ibid., pp. 7-10.

[22] Ibid., pp. 10-15.

The lack of impact on student achievement was interpreted as a probable result of teachers spending too little time on Career Education activities or inappropriate means of selecting the control groups. It was suggested that better methods be employed in selecting experimental and control groups and that more time be spent in providing identifiable Career Education instruction in the classroom.

Although the results of the Minnesota study were disappointing, it was an indication that serious evaluation efforts are being undertaken to analyze the effects of Career Education programs in terms of student achievement.

In this study, several student related variables were assumed to be operating. Thus, the study was structured in such a manner that the following variables could be measured and utilized in the data analysis:

1. Academic achievement levels
2. Vocational maturity levels
3. Self-concepts
4. Attitudes toward others
5. Attitudes toward school

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[23] Ibid., pp. 37-40.

[24] Ibid., pp. 40-44

[25] Ibid., pp. 44-46

6. Attitudes toward selected school subjects
7. Knowledge of occupations
8. Motivational levels.

Several of these variables are obvious ones for measurement and consideration. The second, vocational maturity, was one which has not appeared frequently in Career Education studies, but was considered important in this study.

Crites asserts that career maturity is much like other types of maturity. It develops over a period of time as does intellectual, physical, and social maturity. The time period spans roughly the upper elementary and high school years. Crites has formulated a model of career maturity which states that the degree of career development is affected by (1) Consistency of Career Choices, (2) Realism of Career Choices, (3) Career Choice Competencies, and (4) Career Choice Attitudes.[26] The first two dimensions relate to the content of career choice while the remaining two relate to the process of career choice. Crites feels that the two process dimensions are especially compatible with the general objectives or proposed outcomes of Career Education.

Management Component

Variables active in the Management Component were neither easy to define nor to measure. However, through personal interview techniques, data were gathered relative to the following variables:

1. Goal clarification by the project administration.
2. Support for project personnel by project administration
3. Utilization of physical facilities and materials
4. Utilization of human resources
5. Effective administrative procedures

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[26] John O. Crites, "Career Maturity and Career Education," Criteria Number 7 (1974), p. 1

Community Component

The overall objective of the study of the community segment was to evaluate the extent and effectiveness of community participation in the Hazard Career Education project and to identify implications for improvement of Career Education efforts in Kentucky.

The specific objectives of this segment of the study were:

1. To determine the effectiveness of various programs, procedures and techniques in securing general public understanding of Career Education in the Hazard Region by assessing public understnading of Career Education at the termination of the project.
2. To determine the effectiveness of programs, procedures, and methods in securing general public commitment to Career Education in the Hazard Region by assessing public commitment to Career Education at the termination of the project.
3. To determine the effectiveness of securing minority group (primarily socio-economic) understanding and commitment to Career Education in the Hazard Region by (1) identifying minority groups in the Hazard Region, (2) assessing minority group understanding of and commitment to Career Education at the time of termination of the project.
4. To determine the most effective procedures in securing resource persons from the Hazard community by: (1) identifying procedures for securing resource persons from the community, and (2) determining which procedures were most effective.
5. To determine the extent of advisory committee use in implementing Career Education in the Hazard Region by: (1) identifying levels of advisory committees used by the various schools and (2) ascertaining the effectiveness of these advisory groups.

Professional Staff Development Component

Certain professional staff development objectives were identified. They were:

1. To assess the relative effectiveness of in-service programs and a activities in increasing the knowledge level of staff members concerning Career Education.
2. To assess the relative effectiveness of in-service programs and activities in creating, among professional staff members, favorable attitudes toward Career Education.
3. To identify personnel characteristics which foster the implementation and expansion of Career Education within schools.
4. To identify personnel development techniques and strategies which are most effective with personnel.
5. To identify (1) problems encountered by personnel in implementing Career Education as a part of the on-going educational process, and (2) identify the techniques and procedures used to overcome the problems encountered.

Student Component

The overall objective of this section of the study was to assess the effects of Career Education programs, services, and activities on students. The specific objectives were:

1. To determine the effect of the Career Education program on student academic achievement.
2. To determine the effect of the Career Education program on the vocational maturity of students.
3. To determine the effect of the Career Education program on the self concepts of students.

4. To determine the effect of the Career Education program on the attitude of students toward school and others.
5. To determine the effect of the Career Education program on student's knowledge concerning occupations.
6. To determine the effect of the Career Education program on student absenteeism.
7. To determine the effect of the Career Education program on student motivation.
8. To determine the effect of the Career Education program on student occupational aspirations.

Project Management Component

The overall objective of this component was to assess the extent to which the program managers and the management procedures were effective in (1) setting and clarifying goals, (2) utilizing resources, (3) facilitating production, and (4) countering deviations within the operation which held potential for obstructing the achievement of goals.

Specific objectives to be attained in determining the effectiveness of the management of the project included:

1. To determine the extent to which project goals were articulated and clarified to all persons concerned with the achievement of them.
2. To determine the extent to which project managers were supportive in facilitating the work of all persons responsible to them.
3. To determine the extent to which project managers utilized physical facilities and materials in carrying out the project.
4. To determine the extent to which project managers utilized human resources, both within and outside the school system, in carrying out the project.

5. To determine the procedures and techniques used in carrying out the project and to identify those which appear to be unusually effective or ineffective in the achievement of goals.

Hypotheses

Hypotheses were tested in two phases of the study -- the Professional Staff Development and Student Components. For the Professional Staff Development Component, the following hypotheses were tested:

Null Hypothesis 1: There are no significant differences among personnel of different age groups in attitudes toward Career Education.

Null Hypothesis 2: There is no significant difference between vocational personnel and non-vocational personnel in attitudes toward Career Education.

Null Hypothesis 3: There are no significant differences among elementary, junior high, and secondary teachers in attitudes toward Career Education.

Null Hypothesis 4: There is no significant difference between teachers in Career Education exemplary or pilot schools and other teachers in attitudes toward Career Education.

Null Hypothesis 5: There is no significant difference between educators in various positions in attitudes toward Career Education.

Null Hypothesis 6: There is no significant difference between educators who teach in urban schools and teachers who teach in rural schools in attitudes toward Career Education.

Null Hypothesis 7: There are no significant differences among personnel of different age groups in level of knowledge concerning Career Education.

Null Hypothesis 8: There is no significant difference between vocational personnel and non-vocational personnel in level of knowledge concerning Career Education.

Null Hypothesis 9: There are no significant differences among elementary, junior high, and secondary teachers in level of knowledge concerning Career Education.

Null Hypothesis 10: There is no significant difference between teachers in Career Education exemplary or pilot schools and other teachers in level of knowledge concerning Career Education.

Null Hypothesis 11: There is no significant difference between educators in various positions relative to level of knowledge concerning Career Education.

Null Hypothesis 12: There is no significant difference between teachers who teach in urban schools and teachers who teach in rural schools in level of knowledge concerning Career Education.

Within the Student Component of the study, these hypotheses were tested:

Null Hypothesis 1: There is no significant difference in basic academic skills between a group of students who participated in a Career Education program and a group which participated in a traditional educational program during the 1973-74 school year.

Null Hypothesis 2: There is no significant difference in vocational maturity levels between a group of students who participated in a Career Education program and a group which participated in a traditional educational program during the 1973-74 school year.

Null Hypothesis 3: There is no significant difference in motivational levels between a group of students who participated in a Career Education program and a group which participated in a traditional educational program during the 1973-74 school year.

Null Hypothesis 4: There is no significant difference in attitudes toward self, classmates, reading, school, math, and citizenship between a group of students who participated in a Career Education program and a group which participated in a traditional educational program during the 1973-74 school year.

Null Hypothesis 5: There is no significant difference in level of occupational aspiration between a group of students who participated in a Career Education program and a group which participated in a traditional educational program during the 1973-74 school year.

Hypotheses 1-4 were tested at individual grade levels. Hypothesis 5 was tested at only one grade level (Grade 10). Sub-hypotheses were also tested, since data were analyzed separately by grade level.

Description of the Region

The Hazard Education Region (XII) is located in the Southeastern part of Kentucky and comprises eight county and three independent school districts. The county systems include Letcher, Perry, Knott, Breathitt, Leslie, Lee, Owsley, and Wolfe. The three independent districts are Jackson, Jenkins, and Hazard, Kentucky. The regional office is located in Hazard, Kentucky. (Figure 1, p. 39)

CHAPTER 2

PROCEDURE

Population and Sample

Community Component

The population for the Community Component included all adult residents of the Hazard Educational Region (approximately 20,000). Proportionate sampling was utilized in order to achieve a five percent representative sampling of the residents in the region. The 1,000 names were selected randomly from telephone directories. This sample was considered sufficient to ascertain the community opinion concerning Career Education. Questionnaires, including return-addressed, stamped envelopes were mailed to the sample group. A telephone follow-up of non-respondents was conducted in order to double-check validity of the response.

Professional Staff Development Component

Since the purpose of the Professional Staff Development Component was to access the effects of the Career Education program on participating teachers as well as to get information from them concerning problems and successful practice, the population included all professional personnel who had participated in the summer Career Education workshops at Hazard or Jackson.

Some teachers, although they attended the workshops, did not actively participate in the year's Career Education program. This group was encouraged not to respond to follow-up questionnaires, since they weren't in a position to provide the necessary data.

Therefore, the final sample was those teachers who had actively participated in both the summer workshops and the subsequent year's activities.

Student Component

The population for the Student Component was all elementary and secondary students from the entire education region. Because of the large number of students who participated, a sample necessarily was chosen to participate in the study.

Several sampling methods were considered, but problems were inherent in all. The total population could not be tested. Proportionate sampling from all grades in all schools was not feasible due to cost and increase of testing only 2 or 3 students from every class.

After much deliberation, a group sampling technique was selected. Further, it was decided that not all grades would be used. The Kentucky State Testing Program was found to gather data on 4th, 8th, and 11th grade students each year. The same procedure was followed in this study, although the sixth grade was added as a group from whom to collect additional data from the Career Maturity Inventory, and the 10th grade for occupational aspiration data.

Eight fourth grade classes were selected to participate in the study. Four were chosen to represent the Career Education group and four were chosen as a control group. The Career Education group came from teachers who had attended the summer workshops and who had made a commitment to the following year's Career Education activities. The control group was chosen in such a way as to equate, to the extent possible, the student and teacher variables such as age, experience, socio-economic level, and achievement. These teachers had not participated in the summer workshops and were not expected to become involved with Career Education during the following year.

The sixth and eighth grade samples were chosen similarily to the fourth grade. The eleventh grade groups were total grades from selected high schools. The workshop rosters were analyzed and four high schools were selected. Two had teachers from nearly all subject areas participating in the Career Education activities. The other two had no one, or possibly just one teacher participating. Thus, the Career Education and control groups were selected.

Project Management Component

Data relative to the Project Management Component were gathered from the Regional Career Education Staff, from all System Career Education Coordinators, and from a sample of classroom teachers.

As assessment of the effectiveness of the organization and management procedures was ascertained from the coordinators and teachers. Management strategy was obtained by interviewing the regional staff themselves.

Data Collection and Instrumentation

Community Component

Data were collected with specially-developed instruments for this phase of the study. One instrument was developed for use in collecting data from principals of participating schools in the Hazard Region regarding administrative practices for securing community involvement in Career Education. These "Key Educators" were asked to provide information concerning their perceptions of (1) public knowledge about and interest in Career Education, (2) public relations and information dissemination activities of the project, (3) means of securing and extent of involvement of resource persons in the community, and (4) extent of usage and effectiveness of advisory committees.

The instrument utilized for collecting this data was entitled Career Education Questionnaire for Key Educators in the Hazard Region (Appendix A.) It was developed by persons directing this phase of the study. The instrument was reviewed by project directors of the several Career Education projects across the state of Kentucky. Those administrators indicated their reactions and it was decided that the final version of the questionnaire would effectively gather the needed information.

The questionnaire which was developed for use in gathering data from members of the community was called Public Awareness of Career Education (PACE) (Appendix B.) The questionnaire had two versions, (a yellow for odd-numbered respondents and blue for even-numbered individuals.) Each consisted of 28 items concerning Career Education. This instrument was developed and revised in the same manner as the questionnaire described above with the addition of a curriculum specialist at the university who reviewed the instrument for readability at the level of the populace being surveyed. One version of the instrument was sent to one-half the sample and the alternate form to the other half. The scale provided for responses in a five-point Likert-type arrangement. Possible responses ranged from "Strongly Agree," to "Strongly Disagree." The questionnaire also contained a section for gathering demographic data on respondents.

Professional Staff Development Component

In order to achieve the objectives specified for this component, two instruments were used to collect data concerning teachers. The instruments generally provided information relative to several of the outlined objectives rather than being aimed at individual objectives.

A Teacher Questionnaire for the Hazard Career Education Project was developed by the research project staff. The instrument contained a section which asked for the following types of background information concerning the teachers: (Appendix C.).

1. Sex
2. Age
3. Years of teaching experience

4. Years of full-time employment outside education
5. Grade primarily taught
6. Subject primarily taught
7. Participation in 1973 summer Career Education workshops

The second section requested teachers to assign rank orders (from most effective to least effective) to six lists of items concerned with the Career Education effort. The first list dealt with the rank ordering of persons who had contributed to the teachers' increased knowledge and understanding of Career Education. The second list concerned activities which had lead to increased knowledge and understanding of Career Education among teachers. The third list was concerned with assessing the effectiveness of various teaching methods or strategies in conveying Career Education concepts to students. Since the use of resource persons has been considered vital to the Career Education effort, the fourth item contained a listing of methods of securing such persons for classes. Item five was designed to assess the effectiveness of various approaches or methods or activities in motivating students. The final item in this section concerned the teachers' perceptions of the relative importance of several factors which could determine the success of the Career Education program.

Section III of the instrument was directed chiefly at determining teachers' perception regarding the community involvement component of the Career Education project. Special emphasis was given to determining teachers perception about whether various groups had become knowledgeable about Career Education or displayed favorable attitudes toward Career Education.

Section IV requested teachers to identify (1) rewarding experiences encountered, (2) problems encountered, and (3) techniques or procedures utilized to overcome problems and/or suggested techniques and procedures for overcoming unsolved problems.

Section IV also listed 26 potential problems which could affect the success of Career Education. The teachers were asked to indicate the extent to which each affected their own situations. Responses were, (1) No Problem, (2) Little Effect, (3) Some Effect, and (4) Much Effect. This listing was adapted by the project staff from an interview scale developed in a project directed by Dr. Eugene Harryman at Western Kentucky University.[1]

Data were collected with the Teacher Questionnaire at the end of the 1973-74 school year. Teacher responses to the questionnaire provided information relative to all five objectives specified for the Professional Staff Development Component of the study.

The Career Education Information Inventory (CEII) was prepared in 1972 by staff members of the Kentucky Research Coordinating Unit of the University of Kentucky.[2] It consists of 72 statements about (1) the concept of Career Education, (2) its place in the total educational program, and (3) implementation considerations. Respondents were asked to indicate their degree of agreement with each item on a five-point Likert-type scale ranging from "Strongly Agree" to "Strongly Disagree."

The original instrument was developed from a list of items extracted from curriculum guides related to the world of work. The original list of items was reviewed and edited by the developers. A tentative questionnaire (along with editorial remarks and suggestions) was used as the basis for the 72-item questionnaire.

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[1] Norman D. Ehresman, M. Eugene Harryman, and Dorothy DeMars, Analysis of Problems Encountered by Classroom Teachers Associated with their Involvement in the Kentucky Regional Career Education Development Project, (Bowling Green, Kentucky: Western Kentucky University, June 28, 1973).

[2] Alfred J. Mannebach, et al. Career Education Information Inventory, (Lexington, Kentucky: University of Kentucky, College of Education, Kentucky Research Coordinating Unit for Vocational Education, March, 1972).

The CEII was administered in a pretest-posttest scheme to professional staff members. The pretesting was completed prior to the initiation of the Career Education programs in the schools and prior to the conduct of workshops and seminars on Career Education held in the Region. Posttesting was accomplished at the end of the 1973-74 school year.

Student Component

Data were collected in a pretest-posttest design corresponding to Campbell and Stanley's Nonequivalent Control Group Design (Design #10).[3] This design is widely used in educational research and involves pretesting and posttesting experimental and control groups where the subjects are not randomly assigned, but constitute intact groups (classes). The design controls for "the main effects of history, maturation, testing, and instrumentation."[4] It can be represented as follows:

$$\begin{array}{llcl} \text{Experimental} & T_1 & X & T_2 \\ \cline{2-4} \text{Control} & T_3 & & T_4 \end{array}$$

It has been suggested that this design satisfies most research design requirements in assessing the effects of Career Education on student attitude or achievement.[5]

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[3] D. T. Campbell and J. C. Stanley, Experimental and Quasic-Experimental Designs for Research, (Chicago: Rand-McNally, 1963).

[4] Career Education 1973: A Plan for Evaluating Student Growth, (New York: Career Education, 1973), p. 20.

[5] Ibid., p. 19.

To assess the effects of Career Education on students, in accordance with the objectives of the Student Component phase of the study, the following variables were measured:

1. Career maturity
2. Basic skills
3. Motivation
4. Attitudes toward:
    - a. self
    - b. classmates
    - c. reading
    - d. school
    - e. math
    - f. citizenship
5. Occupational Aspirations

Fourth grade students took tests to assess basic skills and attitude (except attitude toward citizenship). Sixth graders completed only an instrument which measured career maturity. All of the first four variables were measured in the case of eighth and eleventh graders. In addition, information concerning absenteeism was gathered for eleventh graders. It was considered most appropriate to measure absenteeism for only the older group of students since they typically are in an age group which makes absenteeism more directly attributable to attitude and/or motivation. Younger students are typically absent from school because of illness or weather conditions. Older students are not as likely to be influenced by common childhood diseases (having passed the age where such diseases usually develop) and are less likely to miss school because of extreme weather conditions. Eleventh grade students who are absent from school, and who are not legitimately ill, may miss school as a matter of choice more easily than younger students who are under much more direct supervision by parents and others. Thus, it was decided that absenteeism information would only be meaningful for this older group of students.

To assess levels of occupational aspiration, the fifth variable, a modified version of the Occupational Aspiration Scale (OAS) was used. The OAS was developed by Haller and consisted of eight multiple choice items.[6] Respondents are permitted to respond realistically (what is the best job you are really sure you can get?) and idealistically (what job would you choose if you were free to choose any?). Each type of question is asked in terms of the short-range (by the time you are 30 years old) goals of students. Thus, there are four questions concerning short-range goals and four concerning long-range goals. There are two realistic and two idealistic questions within each goal range.

Each of the eight questions has a list of 10 jobs which span the range of occupational prestige. The particular form of the OAG used in this study was adopted by Powers for a study of occupational aspirations of Appalachian students.[7] The revisions were made to eliminate possible sex bias in the occupational listings. This was accomplished by adding the equivalent "female" job title to those typically termed "male" jobs. The job lists were not arranged in any particular order of prestige. A computer program was developed to assign prestige scores to responses. A copy of the OAS is included in Appendix D.

The students who completed this instrument did so in the spring of 1973 when they were ninth graders (pretest). They also completed the instrument in the spring of 1974 (posttest). Part of these students were involved in

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[6] Archibald O. Haller and Irwin W. Miller, The Occupational Aspiration Scale, (Cambridge, Massachusetts: Schenkman Publishing Company, 1971.

[7] Betty C. Powers, "The Relationship of Occupational Aspirations and Expectations to Selected Personal, Family, Community, and School Related Factors," Unpublished doctoral dissertation, University of Kentucky, 1974.

Career Education programs as tenth graders and the remainder were control group students.

The Career Maturity Inventory (CMI) was utilized to collect data relative to the career maturity of students. The CMI, published by CTB/McGraw-Hill, measures variables common to two of Crite's dimensions of career maturity -- Career Choice Competencies and Career Choice Attitudes. Formerly called the Vocational Development Inventory (VDI), the CMI consists of an Attitude Scale and a Competence Test which assess the two choice process dimensions mentioned to measure the following:

1. Orientation to the World-of-Work
2. Conceptions of Career Decision-Making
3. Involvement in Choice and Work
4. Independence in Career Choice
5. Preference for Factors in Career Choice[8]

The Competence Test is composed of five subtests which assess the four stages of career choice. The four steps and the respective subtests are:

1. Information-gathering--Knowing Yourself--Knowing About Jobs
2. Goal-Selection--Choosing a Job
3. Planning--Looking Ahead
4. Problem-Solving--What Should They Do?[9]

Crites states that the CMI is appropriate as an assessment technique in several settings. He further asserts when a Career Education program has been initiated, the CMI has special value in evaluating the effectiveness of the program.[10]

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[8] Crites, "Career Maturity and Career Education," p. 2.

[9] Ibid.

[10] Ibid.

Numerous reliability and validity studies have been conducted with the CMI, especially the older Attitude Scale. Content validity for the Attitude Scale was established in a study of the agreement between the empirical scoring key and one derived "rationally."[11] A panel of judges was asked to choose the more mature response to each attitude item. The judges agreed with the national standardization sample on 37 items (74%). Criterion related validity has been demonstrated in several studies which found significant correlations between the Attitude Scale and other scales which were designed to measure criterion variables directly.[12] To establish construct validity, studies were conducted to assess response bias (response set bias and response style bias were found to be negligible) and correlation with other variables (most background variables were not related to the scale; the scale correlated significantly with several intelligence, aptitude, and personality scales).[13]

Reliability studies showed an overall internal consistency coefficient of .74 for grades 6 through 12.[14] The test-retest reliability (stability) coefficient was .71, a correlation which was termed "low enough to allow for maturational variance but high enough to establish systematic measurement of the variable being quantified."[15]

The Competence Test has not been used as long as the Attitude Scale, thus the number of studies using this section of the CMI is smaller. Internal consistency measures are available, however most of the correlations within subtests range from .72 to .90, establishing that the five parts of the test consist of relatively homogeneous sets of items.[16]

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[11] John O. Crites, Career Maturity Inventory: Theory and Research Handbook, (Monterey, California: CTB/McGraw-Hill, 1973), p. 15.

[12] Ibid., pp. 15-16.

[13] Ibid., pp. 16-21.

[14] Ibid., p. 14

[15] Ibid., p. 14.

Some validity studies have also been conducted. Content and criterion-related validity were demonstrated in studies which showed the test to be systematically related to time (expressed as grade levels).[17] The product-moment correlation among the five subtests was found to be .54, within the range of the approximate correlation hypothized from the construct.[18]

An integrated series of tests was used to assess the basic academic skills of the students. The California Comprehensive Tests of Basic Skills (CTBS) is a testing series designed to test student skills in reading, language, arithmetic, and study skills. There are four levels in the testing program: Level 1 accommodates the second half of Grade 2 and Grades 3 and 4; Level 2 covers Grades 4, 5, and 6 overlapping Level 1 at Grade 4; Level 3 includes Grades 6, 7, and 8 overlapping Level 2 at Grade 6; and Level 4 is addressed to Grades 8, 9, 10, 11 and 12 overlapping Level 3 at Grade 8.

Levels 2, 3, and 4 of the CTBS Battery include the following tests:

Reading Vocabulary
Reading Comprehension
Language Mechanics
Language Spelling
Arithmetic Computation
Arithmetic Concepts
Arithmetic Applications

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[16] *Ibid.*, p. ~~33.~~

[17] *Ibid.*, p. 34.

[18] *Ibid.*, p. 35.

Study Skills Using Reference Materials

Study Skills Using Graphic Materials[19]

The total battery consists of 318 multiple-choice items; 85 items relate to Reading, 85 to Language, 98 to Arithmetic, and 50 to Study Skills. The tests were administered in accordance with the instructions outlined in the Examiner's Manual. Two to three days were required in most instances to administer the tests.

Eleven scores result from the scoring -- ten scores representing each of the specific subtests and a total score on the battery. For each student on each subtest, an obtained grade equivalent score, percentile rank, and stamine were reported.

The Junior Index of Motivation (JIM Scale) was used to assess students' motivation toward school. The instrument, developed by Jack R. Frymier at the Ohio State University, consists of 80 items and requires approximately 30 minutes for administration. However, only 50 items are scored.

Frymier has conducted extensive studies of the reliability and validity of the JIM Scale for use with public school and college students. Nine separate studies were reported, eight of which were concerned with developing the scale and testing its reliability and validity and one to determine the specific content of the Scale. Each succeeding study was undertaken to answer questions or solve problems encountered in earlier studies.

Frymier reports a test-retest reliability of .70 from a sample of 718 junior high school students (369 boys, r = .74; 349 girls, r = .63).[20]

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[19] State-wide Testing Program, (Frankfort, Kentucky: Department of Education, Bureau of Pupil Personnel Service, Division of Guidance Services, 1973), p. 4.

[20] Jack R. Frymier, "Development and Validation of a Motivation Index," Theory Into Practice, IX (February 1970), p. 78.

Split-half reliability coefficients of correlation were .63 for 139 boys and .72 for 104 girls and a total group (N=243) coefficients of .67.[21] Similar results were obtained with samples of high school students and college students. The JIM Scale was also found to correlate significantly with another motivation scale (Farquhar's M-Scale) and with achievement tests (Iowa Tests of Educational Development).

A factor analysis study was designed to identify the content of the JIM Scale. The six largest rotated factors accounted for 51 percent of the variance and these factors were assigned the following names:

I. Belongingness - Alienation
II. Positive School Attitude - Negative School Attitude
III. Personal Control - Fatalism
IV. Optimism - Pessimism
V. Flexibility - Dogmatism
VI. Idealism - Pragmation[22]

The Kentucky Student Attitude Inventory (KSAI) was adapted for use in this study. The instrument was designed to assess student concepts about or attitudes toward (1) self, (2) classmates, (3) reading, (4) school, (5) math, and (6) citizenship. All six attitude areas were tested for grades 8 and 11. Only the first five were tested for grade four.

Management Component

Interview guides covering the objectives of the evaluation were prepared for use in the study (Appendix E.). In-depth interviews were conducted with the six management personnel (cooperative director, project director, four component directors). In-depth interviews were also conducted with the thirteen school system coordinators. These coordinators, due to their strategic location between the project staff and the school district personnel, were judged to be the most knowledgeable persons available concerning the performance of project management. Additionally, a small sample of superintendents of the participating districts, teacher members of the Career Education teams, and teachers of the participating districts were interviewed. The purpose of the latter interviews was to validate information secured in the in-depth interviews.

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[21] Ibid., p. 78.

[22] Ibid., p. 85.

The data gathered in these interviews were organized consistently with the objectives of the evaluation.

Data Analysis

Community Component

As suggested by Career Education project officials the "Key Educators" in the Hazard Region were assured that no statistical comparisons would be made among the schools and/or school systems. Descriptive data from the questionnaire were tabulated so that some judgments could be made concerning the effectiveness of the project in the area of community involvement.

The PACE questionnaire was scored by assigning point values to the responses -- Strongly Agree = 5, Strongly Disagree = 1. The demographic variables were used as main factors in the analysis.

Professional.Staff Development Component

Pretest-posttest comparisons were made on the teachers' scores on the CEII. The major statistical treatments were the multiple discrimination analysis and Hotelling's T^2 procedure. Age, vocational versus non-vocational, and level taught were used as classification variables in the analysis.

The data from the Teacher Questionnaire were analyzed chiefly through the method of computing means and rank order for most items, especially in Sections II and III of the instrument. Demographic variables were used to classify respondents into age, sex, and grade level taught for the analysis. Some items from Sections III and IV were tabulated and analyzed in order to relate them to evaluation objectives concerning (1) the extent to which the community and its resources were utilized, and (2) problems encountered and solutions used to overcome them. Section IV also contained a list of 26 potential problems. Point values ranging from 1 to 4 were assigned to the four responses.

Student Component

Simple statistics were generated for all student groups--means and standard deviations. Further, the analysis of covariance technique was utilized to test hypotheses concerning the effect of Career Education on student variables. Pretest scores were used as the covariate in the analysis in order to eliminate possible initial group differences. The analysis of covariance is suggested by Campbell and Stanley as the appropriate statistical technique for this research design.[23] A test was first made to determine if an interaction between sex and group membership was operating. The absence of significant interactions was a signal to investigate main effects (sex, group).

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[23] D. T. Campbell and J. C. Stanley, Experimental and Quasi-Experimental Designs for Research, (Chicago: Rand-McNally, 1963).

CHAPTER 3

FINDINGS
COMMUNITY COMPONENT

The primary objective of the community segment of the Hazard Research Project was to evaluate the extent and effectiveness of community participation in the Hazard Career Education project. Special objectives were the determination of: public understanding and commitment, minority group understanding and commitment, utilization and procedures for utilizing resource people, and the extent of use and effectiveness of advisory committees. Data were collected near the end of the project year from a random sample of citizens of the region as found in telephone directories, and from principals in affected schools in the region. Two instruments were developed and utilized with these group; The Career Education Questionnaire for Key Educators in the Hazard Region (Appendix A) and the PACE (Public Awareness of Career Education) questionnaire (Appendix B). It should be noted that several problems beset this segment of the project. First, the Career Education Staff emphasized at an early meeting that little emphasis had been placed in securing community involvement. This precluded use of a pretest/treatment/posttest design. It was then decided to conduct an ex post facto, point-in-time assessment by surveying the respective communities and administrators near the end of the school year. This created the problem of securing responses during the busy spring/early summer period when people are gardening, vacationing, farming, etc. A mailed follow-up was sent to the key educators approximately three weeks after the initial mailing. Because of the nearness to the project completion deadline, a telephone follow-up of non-respondent citizens was made through random sampling technique.

Findings relating to the five objectives of the community segment were reported by data source (instrument used).

Questionnaire for Key Educators

This instrument was used to elicit such information as: existence of school board policy concerning Career Education; newspaper, radio, and television coverage; resource personnel availability; use, value, means in securing, and follow-up procedures; parental interest and involvement; and advisory committees use and value. Out of 57 schools identified by project staff as engaged in Career Education, 40 returns, or 70 percent, were received. Geographical location of the school (principals) responding can seen in Figure 1.

School Policy on Career Education

When asked if their school had a written policy on Career Education, 17, or 46 percent indicated affirmatively, while 20, or 54 percent said no. Copies of the policy statements for Knott County (Hindman Elementary) and Jenkins Independent School System were sent in and may be seen in Appendix F. Both included plans for community involvement. Other responses may be seen in Table 1.

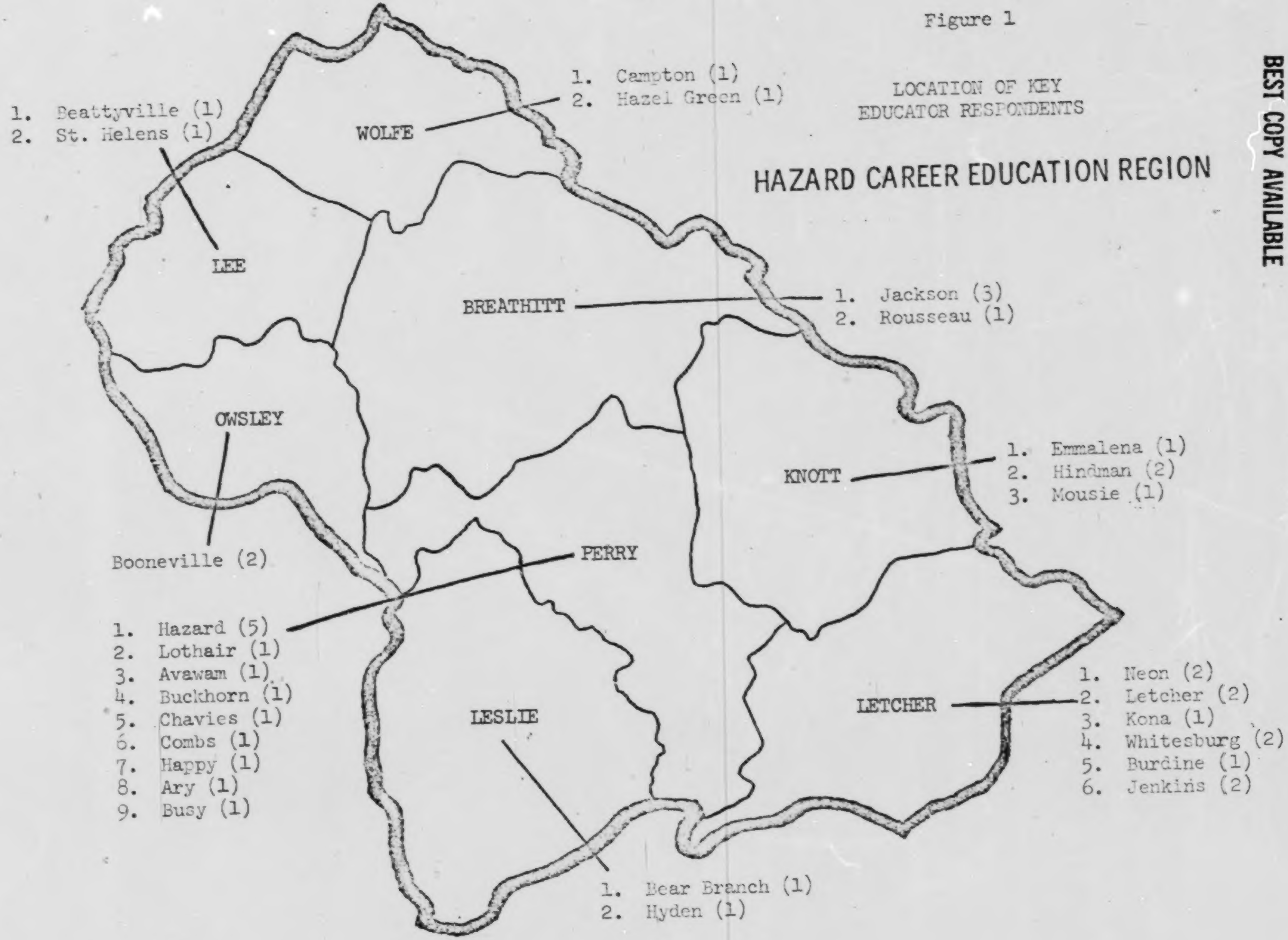
News Media Coverage of Career Education

Principals revealed that there had been considerable coverage of Career Education. Twenty-nine respondents reported 234 articles, an average of eight per school. Three-hundred-forty-seven column inches of news space were used by 14 respondents, for an average of 24.8 column inches. Newspaper coverage had increased since September in 18 cases, or 72 percent of those responding; it stayed about the same in 6 cases (24 percent), and it had decreased in only one case. Two articles were sent in, both of which included several pictures

Figure 1

LOCATION OF KEY
EDUCATOR RESPONDENTS

HAZARD CAREER EDUCATION REGION


1. Beattyville (1)
2. St. Helens (1)
WOLFE
1. Campton (1)
2. Hazel Green (1)
LEE
BREATHITT
1. Jackson (3)
2. Rousseau (1)
OWSLEY
KNOTT
1. Emmalena (1)
2. Hindman (2)
3. Mousie (1)
Booneville (2)
PERRY
1. Hazard (5)
2. Lothair (1)
3. Avawam (1)
4. Buckhorn (1)
5. Chavies (1)
6. Combs (1)
7. Happy (1)
8. Ary (1)
9. Busy (1)
LESLIE
LETCHER
1. Neon (2)
2. Letcher (2)
3. Kona (1)
4. Whitesburg (2)
5. Burdine (1)
6. Jenkins (2)
1. Bear Branch (1)
2. Hyden (1)

of Career Education group activities. Five respondents indicated that articles had been placed in the school scrapbook or were otherwise not available.

Ninety percent of the respondents indicated that local radio and television coverage of Career Education was needed, while just four (10 percent) felt it was at about the correct level. None thought less was needed.

Table 1. Comments by Key Educators Regarding School Policy on Career Education

Comment	Number of Responses
At least two units are taught by each teacher	4
Career Education is fused with other subject matter	3
Policy is permissive; teachers may practice Career Education if they choose to	2
Policy is part of school system philosophy	2
Policy is being developed	2
No written policy exists	2
Career Education is considered in the schedule	1
A policy exists but is not available	1

Public Interest in Career Education

When queried about public interest in Career Education in the local school, principals were nearly unanimous in their feeling that more was needed, as indicated by 36 (90 percent) checking that item. Four felt that public interest was about right. No principals thought that less interest was called for.

Comments were made by four respondents; three said they had received very good to excellent public acceptance of Career Education, while one said that some people were concerned that the quality of the academic program would suffer. One respondent suggested that there was a need to formulate new ways to reach the general public.

Regarding parents' roles in the Career Education program, most respondents reported that parents were in favor of and involved in Career Education, but didn't know much about the program. These findings were reported in Table 2. In the "comments" section, one respondent said parents were most cooperative; another stated that a good start was made in reaching parents during the first year, awareness stage; while a third said parents were indifferent because they were uninformed.

Resource Personnel Involvement in the Career Education Program

Most respondents agreed that resource personnel were available in the community, that they were used in Career Education and were helpful. These data are found in Table 3.

Principals were also asked what means were used to secure resource persons. A wide range of methods was used, with personal invitation by teachers and telephone contacts, predominating. These data are presented in Table 4.

Various means of follow-up of resource persons were reported by respondents, but a letter to the speaker and/or his employer were the major methods utilized. Specific data on this aspect of the study are outlined in Table 5.

Use and Effectiveness of Advisory Committees

The last item asked of principals dealt with the use and value of advisory committees in their local Career Education programs. More than one-third reported a special advisory committee for Career Education while 42.5 percent used an advisory committee which covered the total school programs (Table 6).

Table 2. Key Educators' Responses Regarding Parents' Roles in Career Education[a]

Statement	N	Responses					Mean of Responses
		Strongly Agree (1 on Scale)	Agree (2 on Scale)	Undecided (3 on scale)	Disagree (4 on Scale)	Strongly Disagree (5 on Scale)	
Parents are involved in Career Education	35	5	17	5	6	2	2.5
Parents are in favor of Career Education	30	6	20	3	0	1	2.0
Parents don't know much about Career Education	30	6	15	1	8	0	2.4

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[a] A five-point scale was used with Strongly Agree = 1 and Strongly Disagree = 5.

Table 3. Key Educators' Responses Regarding Resource Personnel in the Community[a]

Statement	N	Responses					
		Strongly Agree (1 on Scale)	Agree (2 on Scale)	Undecided (3 on Scale)	Disagree (4 on Scale)	Strongly Disagree (5 on Scale)	Mean of Response
Resource people in the community are generally available when needed	38	10	23	0	3	2	2.00
Resource people are used in Career Education classes	30	11	15	2	1	1	1.87
Resource are helpful in implementing the Career Education concept	30	19	10	1	1	1	1.59

[a] A five point scale was used with Strongly Agree = 1 and Strongly Disagree = 5.

Table 4. Means Used to Secure Resource Personnel for Career Education in the Hazard Region

Method	N	Percentage
Teachers invite personally	39	97.5
Telephone contacts	38	95.0
Requests from the principal	28	70.0
Students write request letters	23	57.5
Community survey	17	42.5
Teachers write request letters	17	42.5
Requests from the superintendent	9	22.5
Guidance counselors	2	5.0
Volunteers from the community	1	2.5
Career Education coordinator secures	1	2.5
Use of card file on resource person	1	2.5
Children invite parents	1	2.5

Table 5. Follow-up Techniques Used in Conjunction with Resource Personnel for Career Education Programs in the Hazard Region

Method	N	Percentage of Respondents
A letter to the speaker	38	95.0%
A letter to the employer of the resource person	22	55.0
Recognition dinner for resource persons	1	2.5
Recognition through news articles	1	2.5
Telephone call	1	2.5
Invitation to a program wherein a "Certificate of Honor" was given	1	2.5

Table 6. Use of Advisory Committees in Schools with Career Education in the Hazard Region

Type of Committee	N	Percentage of Respondents
Advisory committee for the total program	17	42.5
Special advisory committee for Career Education	15	37.5
Advisory committees for programs other than Career Education	8	20.0
Informal advisory help from selected members of the community	5	12.5
Craft advisory committee	1	2.5

Twenty-seven principals rated their advisory committees for effectiveness in dealing with the Career Education program. Most of the groups were called "moderately effective" (19 or 70.4 percent of the respondents). Seven respondents (25.9 percent) felt their advisory committees were "very effective" and only one principal said his advisory committee was "ineffective"; the latter was partially explained by the comment that the group had been appointed, but no further action was taken to follow-up. One respondent said that no use of advisory help was planned during the initial, "awareness" phase of the Career Education project.

Public Awareness of Career Education - (PACE) Questionnaire

This instrument was developed to determine public awareness of, and commitment to, Career Education in the Hazard Region. A yellow or blue version of the PACE instrument was sent to 500 residents who were randomly selected from the telephone directory. One hundred fifty five returns were received of which 77 were useable. A randomized follow-up of non-respondents was visually scanned and found to be similar to the mailed returns. Therefore, these ten additional respondents were added to the sample, making a total of 87. As would be expected, relatively more responses were received from the more-populous counties, Knott, Perry and Letcher. The geographical distribution of respondents may be viewed on Figure 2.

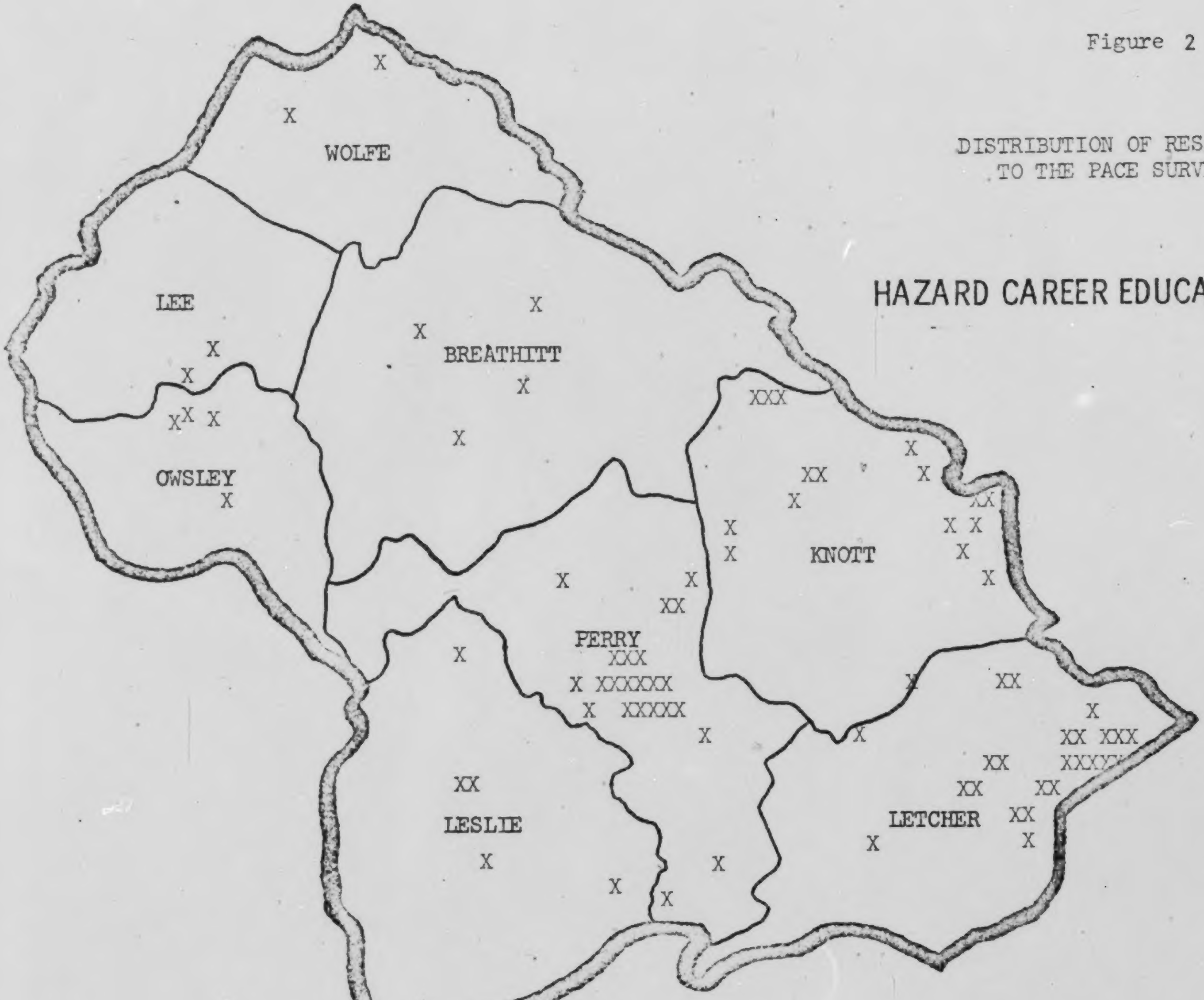
Demographic Characteristics of Respondents to the PACE Questionnaire

Respondents to the survey were predominately male (61%), married (78%), an average of 47 years of age with a high school education and more than three children, of which one was still in school. All respondents were Caucasian. Income levels were predominately in the $3,000 to $10,000-plus range (89.5%). These data appear on Table 7.

Figure 2

DISTRIBUTION OF RESPONDENTS
TO THE PACE SURVEY

HAZARD CAREER EDUCATION REGION


WOLFE
LEE
BREATHITT
OWSLEY
KNOTT
PERRY
LESLIE
LETCHER

BEST COPY AVAILABLE

Table 7. Characteristics of Respondents to the PACE Questionnaire

Characteristic	Percentage	Mean	S.D.	Range	Median	Mode
Age		47.0	15.21	15-87	47	44
Educational Level		11.8	4.04	1-21	12	12
Number Children		3.3	2.59	0-12	3	2
Children in School		1.1	1.36	0-6	1	0
Sex						
Male	61%					
Female	39%					
Marital Status						
Married	78%					
Single, divorced or widowed	22%					
Family Annual Income						
Less than $3,000	10.5%					
$3,000 to $10,000	29.0%					
Over $10,000	60.5%					

Responses by Hazard Region Citizens to the PACE Survey

Respondents reacted to 56 statements regarding Career Education in their community. The items which evoked the greatest agreement were, in declining order:

-The school my children attend should have a Career Education program.

-School programs should help get people ready to work.

-The school counselor is important in setting up a Career Education program.

-The major purpose of Career Education is to help young people look into the many ways to earn a living that would be interesting and fulfilling.

- Work experience is an important part of Career Education.
- Workers from business and industry can be valuable sources of information about jobs for the Career Education program.

Items with which respondents most strongly disagreed, are, in declining order:

- Career Education is for those students who are not able to do the work in regular courses.
- Students know enough about future jobs to make sound career decisions.
- People know about the Career Education program in our county.
- Career Education for girls should be to prepare for a job as a secretary, nurse or teacher.
- Our teachers are prepared to teach in Career Education programs.

All responses are listed in Table 8.

NOTE: Statements appear as they were presented on the PACE instruments. This is designed to help the reader locate specific items on subsequent tables where they appear only as numbered items.

Responses to the PACE Survey Items According to Age

In designing the study, it was hypothesized that no significant difference existed between older and younger citizens regarding items on the PACE questionnaire. Fourteen items proved to be significant at the .01 or .05 levels of confidence; therefore, the null hypothesis was not accepted. Those statements which were significant at the .01 level of confidence are as follows:

- Career Education is more important for boys than girls.
- The major purpose of Career Education is to help young people look into the many ways to earn a living that would be interesting and fulfilling.
- The classes in our school help the children to make wise decisions about their careers.
- Career Education takes place from grade ten through college.

Table 8. Responses to the PACE Survey by Selected Citizens of the Hazard Region[a]

Item (Variable)	Mean	Standard Deviation
1. Career ("World of Work") Education is the same as Vocational Education.	3.18	1.19
2. Career Education begins when children are ready to choose an occupation.	3.21	1.36
3. The school counselor is important in setting up a Career Education program.	1.73	.73
4. A high school student should be prepared to enter a job after graduation	2.28	1.22
5. If given a choice of teachers, I want my children to have a teacher who practices Career Education.	1.88	.83
6. I would like to see more about Career Education in the newspaper.	1.82	.69
7. At the elementary level, Career Education should help children know more about different kinds of jobs.	1.98	1.01
8. Career Education is a part of every school in our county.	3.05	1.11
9. New rooms and equipment are needed in most schools to start a Career Education program.	2.34	1.22
10. The superintendent and principal(s) in our school(s) believe that having a successful Career Education program is very important.	2.41	.95
11. The classes in our school help the children to make wise decisions about their careers.	2.77	1.27
12. Students now know enough about future jobs to make sound career decisions.	3.68	1.12
13. Practical experiences are necessary for a good Career Education program.	1.93	.73
14. People know about the Career Education program in our county.	3.59	1.04
15. Our students know about the different amounts of money that can be earned in different kinds of jobs	3.19	1.10

Table 8. Continued

Item (Variables)	Mean	Standard Deviation
16. Employers know about the Career Education Program in our school(s).	3.07	1.16
17. The teacher should be able to give students information about jobs.	1.80	.73
18. Work experience is an important part of Career Education.	1.77	.77
19. Career Education is concerned with helping each student have a better feeling about himself and his own importance.	1.93	.81
20. Career Education is for those students who are not able to do the work in regular courses.	3.71	1.27
21. Special emphasis in Career Education is aimed at helping the student do well in his career.	1.88	.77
22. Helping children know about jobs should be an important part of classes from kindergarten through grade six.	2.70	1.30
23. Looking into different kinds of jobs should be made part of grades seven through nine.	2.19	.86
24. Career Education takes place from grade ten through college.	2.83	1.15
25. Groups of citizens should be involved in planning Career Education programs.	1.93	.86
26. The major purpose of Career Education is to help young people learn how to make good (wise) choices that are made freely and on their own.	1.83	.70
27. Studying about jobs helps a student prepare for a good job.	1.88	.59
28. A Career Education program helps our students get along with others.	2.10	.88
29. Career ("World of Work") Education should be a separate course.	2.62	1.15

Table 8. Continued

Item (Variable)	Mean	Standard Deviation
30. Schools prepare students for work.	2.29	1.19
31. Career Education should be part of all courses in the school.	2.21	1.12
32. Courses in high school should be grouped around similar kinds of jobs.	2.12	.97
33. The school my children attend should have a Career Education program.	1.54	.51
34. More TV and radio time should be given to the Career Education program in our county.	2.32	1.01
35. It is the school's job to teach students how to make wise job choices.	2.34	1.13
36. In teaching Career Education every class emphasizes what people do in their jobs.	2.36	.96
37. Local citizens help plan and measure success of our Career Education programs.	2.45	.99
38. Students help plan and measure success of our Career Education programs.	2.36	1.03
39. Parents' desires for their children are considered in preparing the local school program of courses.	2.66	1.15
40. Career Education is more important for boys than girls.	3.39	1.24
41. Our teachers are prepared to teach in Career Education programs.	3.22	1.08
42. Our students have the chance to compare their abilities, interests, and needs with the requirements of various types of jobs.	2.71	1.26
43. Parents know about Career Education activities which happen in the school.	3.07	1.20
44. Career Education helps students learn about and choose a job.	1.81	.59
45. The major purpose of Career Education is to help young people discover their own interests and abilities	1.81	.55

Table 8. Continued

Item (Variable)		Mean	Standard Deviation
46.	Career Education for girls should be to prepare for a job as a secretary, nurse or teacher.	3.29	1.26
47.	Career Education helps students know about their own interests and abilities.	1.93	.64
48.	Career Education is meant for all students in a school.	2.43	1.19
49.	Workers from business and industry can be valuable sources of information about jobs for the Career Education program.	1.78	.53
50.	The major purpose of Career Education is to help young people look into the many ways to earn a living that would be interesting and fulfilling.	1.74	.45
51.	Career Education helps students develop good attitudes toward work.	1.95	.62
52.	Future teachers who are finishing college should be ready to teach Career Education.	2.05	.91
53.	It is important that parents help plan Career Education programs.	2.00	.66
54.	Helping students get a job is an important part of any Career Education program.	2.07	.89
55.	Finding out what former students are doing is an important part of any Career Education program.	1.98	.68
56.	School programs should help get people ready for work.	1.64	.49

[a] Responses were made on a five-point scale with 1 = Strongly Agree, 5 = Strongly Disagree.

Those items which were significant at the .05 level of confidence are as follows:

- -The school my children attend should have a Career Education program.
- -Parents know about Career Education activities which happen in the school.
- -Schools prepare students for work.
- -Helping children know about jobs should be an important part of classes from kindergarten through grade six.
- -Career Education for girls should be to prepare for a job as a secretary, nurse, or teacher.
- -Career Education is concerned with helping each student have a better feeling about himself and his own importance.
- -Career Education helps students know about their own interests and abilities.
- -Students now know enough about future jobs to make sound career decisions.
- -In teaching Career Education every class emphasizes what people do in their jobs.
- -Our teachers are prepared to teach in Career Education programs.

A complete analysis of the PACE survey, based on age categories may be seen in Table 9.

Responses to the PACE Survey According to Educational Level

It was further hypothesized that no significant difference existed between citizens with grade school education, high school education and education beyond high school, as regarded their response to the PACE survey. Fifteen items were found to be significant at the .05 level of confidence, thereby not accepting the null hypothesis.

Those items wherein citizens having grade school education differed from those having high school education are as follows:

- -New rooms and equipment are needed in most schools to start a Career Education program.

Table 9. Responses to the PACE Survey by Hazard Region Residents, According to Age[a]

Item (Variable)	AGE LEVEL				F Value	DF	T Value
	Age 35 or above		Less than 35				
	$\overline{X}$	SD	$\overline{X}$	SD			
1	3.24	1.28	3.22	.83	2.36	41	.04
2	3.24	1.39	3.50	1.07	1.70	39	.57
3	1.76	.79	1.67	.50	2.51	40	.42
4	2.00	1.47	3.00	1.50	2.05	39	1.88
5	1.81	.82	2.00	.93	1.27	38	.52
6	1.85	.12	1.78	.22	1.14	40	.28
7	1.81	.15	2.56	.50	3.38	39	1.42
8	2.97	1.20	3.22	.83	2.09	39	.72
9	2.24	1.17	2.89	1.36	1.35	40	1.30
10	2.30	.95	2.89	.31	1.05	40	1.67
11	2.59	1.27	3.67	.87	2.14	39	2.94**
12	3.58	1.09	4.22	.67	2.68	40	2.21*
13	1.94	.79	1.89	.20	1.72	40	.21
14	3.58	1.06	3.67	1.12	1.11	40	.22
15	3.09	1.12	3.33	1.12	1.00	39	.57
16	3.06	1.19	3.75	1.17	1.04	38	.41

Table 9. Continued

Item (Variable)	AGE LEVEL Age 35 or Above $\overline{X}$	SD	Less than 35 $\overline{X}$	SD	F Value	df	T Value
17	1.76	.83	2.00	0.00	0.00	40	1.68
18	1.73	.63	2.00	1.23	3.83*	40	0.65
19	1.72	.63	2.63	1.06	2.80	38	2.32*
20	3.68	1.40	3.89	.93	2.28	38	.53
21	1.81	.73	2.13	.84	1.14	38	.96
22	2.44	1.13	3.67	1.41	1.55	39	2.40*
23	2.00	.52	2.78	1.30	6.35	38	1.75
24	3.00	1.17	2.00	.76	2.41	36	2.92**
25	2.00	.88	1.67	.87	1.03	39	1.02
26	1.88	.75	1.75	.46	2.63	38	.59
27	1.88	.61	1.89	.60	1.03	39	.06
28	1.97	.65	2.75	1.39	4.61**	38	1.55
29	2.57	1.14	2.44	1.01	1.25	37	.31
30	2.13	1.11	3.25	1.17	1.11	36	2.43*
31	2.30	1.21	2.11	.93	1.69	37	.50
32	2.03	.89	2.11	.93	1.09	37	.22

Table 9 . Continued

Item (Variable)	AGE LEVEL				F Value	df	T Value
	Age 35 or Above		Less than 35				
	$\overline{X}$	SD	$\overline{X}$	SD			
33	1.46	.51	1.88	.35	2.06	34	2.61*
34	2.14	.95	2.56	.88	1.17	36	1.22
35	2.10	1.08	2.56	.88	1.50	36	1.27
36	2.27	.91	3.00	.87	1.10	37	2.20
37	2.29	.94	2.67	.87	1.17	35	1.12
38	2.30	1.06	2.33	.71	2.23	37	.11
39	2.60	1.13	3.11	1.17	1.06	37	1.16
40	3.07	1.16	4.44	.53	4.87*	36	4.94**
41	3.03	1.09	3.78	.83	1.70	36	2.17*
42	2.67	1.30	2.89	.93	1.95	37	.57
43	2.97	1.27	3.67	.50	6.48*	37	2.45*
44	1.73	.52	2.22	.67	1.64	37	2.02
45	1.77	.57	1.89	.33	2.91	37	.80
46	3.13	1.20	4.11	1.05	1.29	37	2.36*
47	1.80	.48	2.00	0.00	0.00	37	2.26*
48	2.37	1.22	2.67	1.32	1.18	37	.61
49	1.79	.49	1.89	.60	1.50	36	.44

Table 9. Continued

Item (Variable)	AGE LEVEL				F Value	df	T Value
	Age 35 or Above		Less than 35				
	$\overline{X}$	SD	$\overline{X}$	SD			
50	1.67	.48	2.00	0.00	0.00	37	3.81**
51	1.97	.72	2.00	0.00	0.00	37	.25
52	2.03	.96	2.33	.71	1.86	37	1.02
53	1.97	.62	2.11	.78	1.62	37	.51
54	2.03	.96	2.33	.71	1.86	37	1.02
55	2.00	.79	2.00	0.00	0.00	37	0.00
56	1.60	.50	1.89	.33	2.23	37	2.01

*Significant at .05 level of confidence.

**Significant at .01 level of confidence.

[a] Responses were on a five point scale with 1 = Strongly Agree, 5 = Strongly Disagree

-People know about the Career Education program in our county.

-Career Education should be part of all courses in the school.

Those statements which were significant between grade school level respondents and those respondents having education beyond high school, are as follows:

-New rooms and equipment are needed in most schools to start a Career Education program.

-Career Education is for those students who are not able to do the work in regular courses.

-A high school student should be prepared to enter a job after graduation.

-Schools prepare students for work.

-People know about the Career Education program in our county.

-Helping students get a job is an important part of any Career Education program.

-Career Education should be part of all courses in the school.

Statements of significant difference between citizens with high school versus those with education beyond high school are as follows:

-A high school student should be prepared to enter a job after graduation.

-Career Education is for those students who are not able to do the work in regular courses.

-Career ("World of Work") Education should be a separate course.

-The major purpose of Career Education is to help young people discover their own interests and abilities.

-Career Education helps students learn about and choose a job.

-Helping students get a job is an important part of any Career Education program.

-Career Education begins when children are ready to choose an occupation.

-The teacher should be able to give students information about jobs.

-The major purpose of Career Education is to help young people learn how to make good (wise) choices that are made freely and on their own.

-Career Education helps students develop good attitudes toward work.

-School programs should help get people ready for work.

Specific data regarding responses according to education level of citizens are found in Table 10.

Responses to the PACE Instrument According to Sex

Most statements on the PACE scale were not significantly affected by the sex of the respondent. Only two items caused the researchers to not accept the null hypothesis. These statements are as follows:

-Career ("World of Work") Education should be a separate course.

-Looking into different kinds of jobs should be made part of grades seven through nine.

The total list of statements including means and test scores are seen in Table 11.

Response to the PACE Instrument According to Marital Status

It was hypothesized that no significant difference existed between married citizens and those who were single, divorced, or widowed, in regard to their response to the PACE instrument. This null hypothesis was not accepted in the following three items:

-Career ("World of Work") Education should be a separate course.

-The classes in our school help the children to make wise decisions about their careers.

-Career Education is meant for all students in a school.

The complete listing of statistics relating to this marital status is portrayed in Table 12.

Responses to the PACE Survey, According to Family Size of Respondents

The hypothesis that no significant difference existed between respondents having no children, those with one to two children, and those having three

Table 10. Responses to the PACE Survey by Selected Residents of the Hazard Region, According to Level of Educational Attainment[a]

Item (Variable)	LEVEL OF EDUCATION ATTAINED						T VALUES		
	"A." Up to 8th Grade		"B." Grades 9-12		"C." Beyond Grade 12		A vs B	A vs C	B vs C
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD			
1	2.33	1.16	3.04	1.21	3.73	1.03	1.00	1.95	1.93
2	3.00	1.00	2.96	1.37	3.93	1.14	.06	1.42	2.35*
3	1.67	.58	1.71	.75	1.80	.78	.11	.34	.36
4	1.33	.58	1.74	.92	3.13	1.19	1.06	3.97**	3.86**
5	1.33	.58	1.87	.97	1.93	.62	1.38	1.60	.23
6	1.67	1.16	1.83	.82	1.87	.35	.24	.30	.18
7	1.67	.58	2.13	1.18	1.80	.81	1.12	.33	1.00
8	2.33	1.53	2.87	1.14	3.40	.99	.59	1.16	1.52
9	1.00	0.00	2.25	1.19	2.87	1.19	5.15**	6.09**	1.58
10	3.33	2.08	2.38	.88	2.33	.82	.79	.82	.15
11	2.00	1.00	2.70	1.40	3.20	1.01	1.08	1.89	1.29
12	3.67	1.53	3.63	1.14	3.87	.83	.05	.22	.76
13	1.33	.58	1.92	.65	2.07	.88	1.62	1.82	.57
14	4.67	.58	3.54	1.10	3.47	.99	2.80*	2.86*	.22
15	[illegible].67	1.16	3.21	1.22	3.14	.95	.76	.67	.18
16	3.33	1.16	3.09	1.31	3.07	1.00	.34	.36	.04

Table 10. Continued

Item (Variable)	LEVEL OF EDUCATION ATTAINED						T VALUE		
	"A." Up to 8th Grade		"B." Grades 9-12		"C." Beyond Grade 12		A vs B	A vs C	B vs C
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD			
17	1.67	.58	1.63	.77	2.13	.64	.11	1.25	2.23*
18	1.33	.58	1.75	.85	1.93	.70	1.11	1.58	.73
19	1.67	.58	1.83	.94	2.07	.62	.41	1.09	.96
20	2.00	1.00	3.45	1.37	4.47	.64	2.25	4.11**	3.01**
21	1.67	.58	1.70	.77	2.21	.80	.08	1.38	1.94
22	3.33	1.53	2.70	1.36	2.60	1.18	.69	.79	.23
23	2.00	0.00	2.14	.77	2.27	.96	.83	1.07	.44
24	2.00	1.00	2.86	1.25	2.85	1.07	1.36	1.30	.04
25	1.33	.58	1.87	.87	2.13	.92	1.41	1.96	.89
26	1.33	.58	1.70	.56	2.21	.80	1.03	2.22	2.13*
27	1.33	.58	1.83	.72	2.07	.26	1.35	2.16	1.47
28	1.67	.58	2.09	1.00	2.29	.73	1.07	1.60	.70
29	2.57	.79	2.00	.94	3.21	1.12	1.53	1.52	3.23**
30	1.71	.49	2.24	1.25	2.92	1.26	1.47	3.07**	1.49
31	1.57	.54	2.41	1.37	2.29	.91	2.16*	2.25*	.31
32	2.43	.98	1.82	.95	2.14	.77	1.39	.68	1.03

Table 10. Continued

Item (Variable)	LEVEL OF EDUCATION ATTAINED						T VALUE		
	"A." Up to 8th Grade		"B." Grades 9-12		"C." Beyond Grade 12		A vs B	A vs C	B vs C
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD			
33	1.43	.54	1.44	.51	1.75	.45	.04	1.34	1.71
34	2.43	.98	1.94	.93	2.43	.94	1.13	0.00	1.44
35	2.50	1.38	2.18	1.07	2.74	.95	.52	.58	.09
36	2.29	.76	2.59	1.18	2.36	.25	.75	.21	0.66
37	2.29	.49	2.40	1.06	2.43	1.02	.35	.44	.07
38	2.71	1.25	2.00	.87	2.50	.94	1.38	.40	1.53
39	2.43	.98	2.82	1.33	2.78	1.05	.80	.77	.09
40	2.86	1.07	3.38	1.15	3.79	1.25	1.05	1.77	.93
41	2.86	.69	3.13	1.09	3.57	1.16	.71	1.76	1.08
42	2.43	1.27	2.59	1.28	3.07	1.14	.28	1.13	1.11
43	2.71	.76	3.00	1.32	3.57	1.09	.67	2.10	1.32
44	1.86	.38	1.59	.51	2.14	.66	1.43	1.26	2.57*
45	2.14	.69	1.53	.51	1.93	.21	2.12	.79	2.78**
46	3.14	.90	3.29	1.31	3.50	1.35	.32	.72	.43
47	1.71	.49	1.82	.53	1.93	.27	.49	1.08	.72

Table 10. Continued

Item (Variable)	LEVEL OF EDUCATION ATTAINED						T VALUE		
	"A." Up to 8th Grade		"B." Grades 9-12		"C." Beyond Grade 12		A vs B	A vs C	B vs C
	$\overline{X}$	SD	$\overline{X}$	SD	$\overline{X}$	SD			
48	2.00	.58	2.41	1.42	2.57	1.77	1.01	1.45	.34
49	1.86	.38	1.75	.58	1.86	.54	.53	0.00	.53
50	1.57	.54	1.71	.47	1.86	.36	.58	1.27	1.01
51	1.86	.38	1.75	.58	1.86	.54	.53	0.00	.53
52	2.14	.69	1.82	.81	2.43	1.09	.98	.73	1.72
53	2.29	.76	1.94	.75	1.93	.48	1.02	1.14	.06
54	1.71	.49	1.82	.64	2.64	1.15	.45	2.59*	2.38*
55	2.43	1.13	1.82	.39	2.07	.62	1.38	.78	1.30
56	1.71	.49	1.53	.51	1.86	.36	.83	.69	2.07*

[a] Responses were on a five point scale, 1 = Strongly Agree, 5 = Strongly Disagree

*Significant at .05 level of confidence.

**Significant at .01 level of confidence.

Table 11. Responses to the PACE Survey by Selected Residents of the Hazard Region, According to Sex[a]

Item (Variable)	SEX Male $\overline{X}$	SEX Male SD	SEX Female $\overline{X}$	SEX Female SD	F Value	df	T Value[b]
1	3.24	1.36	3.22	.94	2.09	41	.05
2	3.04	1.46	3.61	1.09	1.79	39	1.42
3	1.58	.50	1.94	0.94	3.47**	40	1.48
4	2.29	1.23	2.11	1.22	1.02	39	0.45
5	1.68	0.78	2.06	0.87	1.25	38	1.41
6	1.75	0.74	1.94	0.64	1.33	40	0.91
7	1.96	1.04	2.00	1.06	1.04	39	0.12
8	3.17	1.20	2.82	1.02	1.41	39	0.99
9	2.42	1.35	2.33	1.09	1.55	40	0.22
10	2.46	0.98	2.39	0.98	1.00	40	0.23
11	2.92	1.32	2.71	1.21	1.18	39	0.53
12	3.83	1.17	3.56	0.86	1.86	40	0.89
13	1.88	0.80	2.00	0.69	1.35	40	0.54
14	3.58	1.02	3.61	1.15	1.26	40	0.08
15	3.42	1.02	2.76	1.15	1.27	39	1.88
16	2.95	1.17	3.28	1.18	1.01	38	0.86

Table 11. Continued

Item (Variable)	SEX				F Value	df	T Value[b]
	Male		Female				
	$\overline{X}$	SD	$\overline{X}$	SD			
17	1.83	0.87	1.78	0.55	2.51	40	0.25
18	1.75	0.68	1.83	0.92	1.87	40	0.32
19	1.86	0.64	1.94	1.00	2.44	38	0.30
20	3.83	1.34	3.59	1.28	1.09	38	0.57
21	1.86	0.83	1.89	0.76	1.21	38	0.10
22	2.74	1.32	2.67	1.28	1.06	39	0.18
23	2.39	1.00	1.88	0.33	8.85**	38	2.30*
24	2.59	1.22	3.06	1.06	1.32	36	1.27
25	1.83	0.78	2.06	1.00	1.65	39	0.80
26	1.81	0.66	1.89	0.76	1.30	38	0.31
27	1.83	0.65	1.94	0.54	1.45	39	0.64
28	2.18	0.91	2.06	0.87	1.08	38	0.45
29	2.88	1.17	1.93	0.62	3.59*	37	3.33**
30	2.50	1.18	2.14	1.23	1.09	36	1.88
31	2.36	1.19	2.07	1.07	1.22	37	0.78
32	2.24	0.97	1.71	0.61	2.52	37	2.07*

Table 11. Continued

Item (Variable)	SEX				F Value	df	T Value[b]
	Male		Female				
	$\overline{X}$	SD	$\overline{X}$	SD			
33	1.60	0.50	1.45	0.52	1.09	34	0.78
34	2.40	1.08	1.92	0.49	4.79**	36	1.86
35	2.29	1.08	2.07	1.00	1.18	36	0.64
36	2.60	0.96	2.14	0.86	1.23	37	1.52
37	2.48	1.05	2.17	0.58	3.28*	35	1.17
38	2.48	1.09	2.00	0.68	2.55	37	1.70
39	2.64	1.11	2.86	1.23	1.22	37	0.55
40	3.44	1.16	3.31	1.31	1.29	36	0.31
41	3.12	1.20	3.38	0.77	2.45	36	0.82
42	2.72	1.21	2.71	1.27	1.10	37	0.01
43	3.16	1.18	3.07	1.21	1.05	37	0.22
44	1.92	0.64	1.71	0.47	1.87	37	1.15
45	1.84	0.47	1.71	0.61	1.67	37	0.67
46	3.36	1.19	3.36	1.34	1.27	37	0.01
47	1.84	0.37	1.86	0.54	2.04	37	0.11

Table 11. Continued

Item (Variable)	SEX				F Value	df	T Value[b]
	Male		Female				
	$\overline{X}$	SD	$\overline{X}$	SD			
48	2.60	1.30	2.14	1.10	1.38	37	1.17
49	1.88	0.44	1.69	0.63	2.06	36	0.96
50	1.80	0.41	1.64	0.50	1.48	37	1.01
51	2.04	0.68	1.86	0.54	1.60	37	0.93
52	2.28	1.02	1.79	0.58	3.11*	37	1.93
53	2.04	0.68	1.93	0.62	1.20	37	0.52
54	2.20	1.00	1.93	0.73	1.88	37	0.97
55	2.08	0.81	1.86	0.36	5.00**	37	1.18
56	1.68	0.48	1.64	0.50	1.09	37	0.23

[a] Responses were on a five point scale, 1 = Strongly Agree, 5 = Strongly Disagree.

[b] Significance at the .05 level indicated by an asterisk(*);
Significance at the .01 level is shown by two asterisks(**).

Table 12. Responses to the PACE Questionnaire by Selected Residents of the Hazard Region, According to Marital Status[a]

Item (Variable)	MARITAL STATUS Not Married (Single Divorced or Widowed) $\bar{X}$	 SD	 Married $\bar{X}$	 SD	F Value	df	T Value
1	3.20	1.10	3.24	1.22	1.24	41	0.07
2	2.75	1.50	3.35	1.32	1.30	39	0.77
3	1.80	0.45	1.73	0.77	2.96	40	0.30
4	2.60	1.34	2.17	1.21	1.24	39	0.68
5	1.75	0.50	1.86	0.87	3.01	38	0.38
6	2.20	1.10	1.78	0.63	3.03	40	0.83
7	2.20	1.10	1.94	1.04	1.11	39	0.49
8	3.60	0.89	2.94	1.15	1.64	39	1.48
9	2.00	0.00	2.43	1.30	0.00	40	2.02
10	2.40	0.90	2.43	0.99	1.22	40	0.08
11	3.60	0.55	2.72	1.30	5.64	39	2.68*
12	4.00	0.71	3.68	1.08	2.34	40	0.89
13	2.00	1.23	1.92	0.68	3.22*	40	0.15
14	3.60	0.89	3.59	1.09	1.49	40	0.01
15	3.40	0.89	3.11	1.14	1.63	39	0.65
16	3.50	1.00	3.06	1.19	1.43	38	0.83

Table 12. Continued

Item (Variable)	MARITAL STATUS						
	Not Married (Single, Divorced or Widowed)		Married				
	$\bar{X}$	SD	$\bar{X}$	SD	F Value	df	T Value
17	1.60	0.55	1.84	0.76	1.95	40	0.86
18	1.80	0.45	1.78	0.82	3.37	40	0.07
19	1.75	0.50	1.92	0.84	2.83	38	0.58
20	3.60	1.14	3.74	1.34	1.37	38	0.26
21	1.75	0.50	1.89	0.82	2.69	38	0.49
22	3.00	1.41	2.67	1.29	1.21	39	0.50
23	2.60	1.34	2.11	0.72	3.49*	38	0.79
24	2.80	1.10	2.79	1.19	1.19	36	0.02
25	2.80	1.30	1.81	0.75	3.03	39	1.67
26	1.75	0.50	1.86	0.72	2.09	38	0.40
27	2.00	0.00	1.86	0.64	0.00	39	1.30
28	2.00	0.00	2.14	0.93	0.00	38	0.90
29	2.00	0.58	2.81	1.20	4.32*	37	2.84**
30	2.25	1.29	2.42	1.17	1.21	36	0.40
31	1.85	1.00	2.46	1.17	1.41	37	1.72
32	1.69	0.63	2.23	1.00	2.28	37	2.11

Table 12. Continued

Item (Variable)	MARITAL STATUS				F Value	df	T Value
	Not Married (Single, Divorced or Widowed)		Married				
	$\overline{X}$.	SD	$\overline{X}$	SD			
33	1.40	0.52	1.62	0.50	1.08	34	1.13
34	2.00	0.71	2.36	1.04	2.15	36	1.26
35	2.08	0.86	2.28	1.14	1.74	36	0.62
36	2.31	0.86	2.50	0.99	1.34	37	0.63
37	2.67	0.78	2.24	0.97	1.55	35	1.44
38	2.08	0.64	2.42	1.10	2.96	37	1.24
39	2.92	1.19	2.62	1.13	1.10	37	0.77
40	3.25	1.36	3.46	1.14	1.42	36	0.47
41	3.33	0.78	3.15	1.19	2.34	36	0.55
42	2.23	1.17	2.96	1.18	1.03	37	1.84
43	2.92	1.12	3.23	1.21	1.18	37	0.79
44	1.69	0.48	1.92	0.63	1.71	37	1.27
45	1.62	0.51	1.88	0.52	1.04	37	1.56
46	3.38	1.26	3.35	1.23	1.05	37	0.09
47	1.77	0.60	1.88	0.33	3.38**	37	0.65

Table 12. Continued

Item (Variable)	MARITAL STATUS						
	Not Married (Single, Divorced or Widowed)		Married		F Value	df	T Value
	$\bar{X}$	SD	$\bar{X}$	SD			
48	1.85	0.80	2.73	1.31	2.69	37	2.60*
49	1.67	0.65	1.88	0.43	2.28	36	1.06
50	1.69	0.48	1.77	0.43	1.25	37	0.49
51	1.85	0.56	2.04	0.66	1.42	37	0.96
52	1.85	0.56	2.23	1.03	3.46*	37	1.51
53	1.92	0.64	2.04	0.66	1.07	37	0.52
54	1.85	0.69	2.23	0.99	2.08	37	1.41
55	1.85	0.38	2.08	0.80	4.49**	37	1.23
56	1.62	0.51	1.69	0.47	1.16	37	0.46

[a] Responses were on a five point scale, 1 = Strongly Agree, 5 = Strongly Disagree

*Significant at .05 level of confidence.

**Significant at .01 level of confidence.

or more children, was not accepted for 19 statements on the PACE survey. These items and the categories in which they fall are as follows:

(No children versus one to two children)

-Career Education takes place from grade ten through college.

-Career Education is more important for boys than girls.

-Career Education is meant for all students in a school.

-The school counselor is important in setting up a Career Education program.

-New rooms and equipment are needed in most schools to start a Career Education program.

(No children versus three or more children)

-Career Education is more important for boys than girls.

-The major purpose of Career Education is to help young people look into the many ways to earn a living that would be interesting and fulfilling.

-Career ("World of Work") Education should be a separate course.

-Career Education is for those students who are not able to do the work in regular courses.

-Career Education is concerned with helping each student have a better feeling about himself and his own importance.

-Work experience is an important part of Career Education.

-Career Education helps students know about their own interests and abilities.

-Students now know enough about future jobs to make sound career decisions.

-Studying about jobs helps a student prepare for a good job.

-Special emphasis in Career Education is aimed at helping the student do well in his career.

-Career Education helps students learn about and choose a job.

-The major purpose of Career Education is to help young people learn how to make good (wise) choices that are made freely and on their own.

(One to two children versus three or more children)

-The classes in our school help the children to make wise decisions about their careers.

- Students now know enough about future jobs to make sound career decisions.
- Practical experiences are necessary for a good Career Education program.
- Employers know about the Career Education program in our school(s).

Complete data on responses according to family size can be seen on Table 13.

Responses to the PACE Survey According to Children in School

The hypothesis that no significant difference existed between citizens responding to the PACE questionnaire, according to their having children in school or not,was accepted for all statements except the following two items:

- Career ("World of Work") Education should be a separate course.
- Career Education is a part of every school in our county.

A complete listing of statements can be viewed in Table 14.

Responses to the PACE Survey According to Levels of Income

It was hypothesized that no significant difference existed between responses to the PACE survey based on levels of annual income. Fourteen statements were found to be significant at the .05 level of confidence in one or more of the following categories:

(Less than $3,000 vs. $3,000-$10,000)

- Studying about jobs helps a student prepare for a good job.
- The major purpose of Career Education is to help young people learn how to make good (wise) choices that are made freely and on their own.
- I would like to see more about Career Education in the newspapers.
- Career Education takes place from grade ten through college.
- If given a choice of teachers, I want my children to have a teacher who practices Career Education.
- The school counselor is important in setting up a Career Education program.
- At the elementary level, Career Education should help children know more about different kinds of jobs.

Table 13. Responses to the PACE Survey by Selected Residents of the Hazard Region, According to Size of Family[a]

Item (Variable)	SIZE OF FAMILY						T VALUES		
	No Children		One to Two Children		Three or More Children		None vs One to Two	None vs Three or More	One to Two vs Three or More
	$\overline{X}$	SD	$\overline{X}$	SD	$\overline{X}$	SD			
1	3.33	1.16	3.41	1.14	3.00	1.28	.11	.46	1.05
2	2.00	0.00	3.64	1.29	3.00	1.32	5.94	3.12	1.50
3	2.00	0.00	1.64	0.79	1.82	0.73	2.16*	1.00	0.77
4	3.67	1.53	2.18	1.22	2.00	1.03	1.61	1.81	0.5
5	2.00	0.00	1.77	0.81	1.94	0.93	1.31	0.27	0.57
6	2.00	0.00	1.81	0.73	1.82	0.73	1.16	1.00	0.02
7	1.67	0.58	2.10	1.22	1.88	0.86	1.00	0.55	0.63
8	3.67	0.58	3.09	1.02	2.81	1.33	1.45	1.82	0.70
9	2.00	0.00	2.59	1.33	2.18	1.19	2.08*	0.61	1.03
10	2.00	1.00	2.64	1.00	2.24	0.97	1.04	0.38	1.29
11	3.33	0.58	3.18	1.26	2.25	1.18	0.35	2.43	2.33*
12	4.33	0.58	4.05	0.79	3.18	1.19	0.77	2.63*	2.61*
13	2.33	1.53	2.09	0.75	1.65	0.49	0.27	0.77	2.22*
14	3.67	0.58	3.77	1.07	3.35	1.12	0.26	0.73	1.19
15	3.00	1.00	3.43	1.03	2.82	1.19	0.69	0.27	1.66
16	3.50	0.71	3.48	1.08	2.59	1.18	0.04	1.58	2.40*

Table 13. Continued

Item (Variable)	SIZE OF FAMILY						T VALUES		
	No Children		One to Two Children		Three or More Children		None vs One to Two	None vs Three or More	One to Two vs Three or More
	$\overline{X}$	SD	$\overline{X}$	SD	$\overline{X}$	SD			
17	2.00	0.00	1.82	0.73	1.76	0.83	1.16	1.17	0.21
18	2.00	0.00	1.86	0.99	1.65	0.49	0.65	2.95**	0.89
19	2.00	0.00	2.09	0.97	1.63	0.50	0.44	3.00**	1.93
20	4.67	0.58	4.00	1.20	3.13	1.36	1.59	3.17*	2.00
21	2.00	0.00	2.00	0.98	1.69	0.48	0.00	2.61*	1.30
22	3.00	1.73	3.00	1.38	2.25	1.00	0.00	0.73	1.94
23	3.00	1.73	2.14	0.77	2.07	0.59	0.85	0.92	0.31
24	2.00	0.01	3.10	1.21	2.53	1.13	4.07**	1.84	1.43
25	2.33	1.53	2.09	0.92	1.63	0.62	0.27	0.79	1.86
26	2.00	0.00	1.90	0.87	1.75	0.45	0.49	2.24*	0.74
27	2.00	0.00	2.00	0.69	1.69	0.48	0.00	2.61*	1.65
28	3.00	1.41	2.14	0.89	2.00	0.82	0.85	0.98	0.49
29	1.83	0.41	2.44	1.13	2.75	1.15	1.48	3.18**	0.69
30	2.60	0.89	2.67	1.32	2.21	1.22	0.11	0.83	0.91
31	2.17	1.17	2.56	1.24	2.17	1.13	0.62	0.00	0.82
32	1.67	0.21	2.22	0.32	2.08	0.93	1.44	1.47	0.37

Table 13. Continued

Item (Variable)	SIZE OF FAMILY						T VALUE		
	No Children		One to Two Children		Three or More Children		None vs One to Two	None vs Three or More	One to Two vs Three or More
	$\overline{X}$	SD	$\overline{X}$	SD	$\overline{X}$	SD			
33	1.80	0.45	1.78	0.44	1.41	0.50	0.09	1.72	2.03
34	2.40	0.89	2.33	0.87	2.17	1.01	0.14	0.52	0.47
35	2.67	1.03	2.56	1.01	1.96	1.02	0.21	1.50	1.50
36	2.67	0.82	2.44	1.01	2.38	0.97	0.47	0.75	0.18
37	2.60	0.89	2.78	0.83	2.17	0.94	0.37	0.96	1.78
38	2.17	0.41	2.22	0.83	2.38	1.14	0.17	0.73	0.42
39	3.00	1.27	3.00	1.00	2.54	1.18	0.00	0.80	1.11
40	4.50	0.55	3.22	1.20	3.17	1.19	2.79*	3.96**	0.10
41	3.50	0.84	3.22	1.09	3.13	1.14	0.56	0.89	0.21
42	2.83	0.98	2.78	1.09	2.67	1.34	0.10	0.34	0.24
43	3.17	0.75	3.00	1.00	3.17	1.34	0.37	0.00	0.39
44	2.00	0.00	2.11	0.78	1.71	0.55	0.43	2.60*	1.42
45	1.83	0.41	1.89	0.33	1.75	0.61	0.28	0.40	0.83
46	4.00	1.10	3.67	1.23	3.08	1.21	0.55	1.79	1.22
47	2.00	0.00	2.00	0.50	1.75	0.44	0.00	2.77*	1.32

Table 13. Con

Item (Variable)	SIZE OF FAMILY						F VALUE		
	No Children		One to Two Children		Three or More Children		None vs One to Two	None vs Three or More	Three or More
	$\overline{X}$	SD	$\overline{X}$	SD	$\overline{X}$	SD			
48	1.83	0.41	3.11	1.36	2.33	1.24	2.64*	1.65	1.49
49	1.67	0.52	1.89	0.60	1.83	0.49	0.76	0.68	0.28
50	2.00	0.00	1.78	0.44	1.67	0.48	1.51	3.39**	0.63
51	2.00	0.00	1.78	0.44	1.04	0.75	1.51	0.27	1.24
52	2.00	0.63	2.11	0.78	2.13	1.04	0.30	0.37	0.04
53	1.83	0.41	2.44	0.73	1.88	0.61	2.08	0.20	2.09
54	2.33	0.52	2.00	0.87	2.08	1.02	0.93	0.84	0.23
55	2.00	0.00	1.78	0.44	2.08	0.83	1.51	0.49	1.36
56	1.83	0.41	1.67	0.50	1.63	0.50	0.71	1.07	0.21

[a] Responses were on a five point scale, 1 = Strongly Agree, 5 = Strongly Disagree

*Significant at .05 level of confidence.

**Significant at .01 level of confidence.

Table 14. Responses to the PACE Survey by Selected Residents of the Hazard Region, According to Children in School

Item (Variable)	RESPONDENTS HAVING				F Value	df	T Value
	One or More Children in School		No Children in School				
	$\overline{X}$	SD	$\overline{X}$	SD			
1	3.46	1.25	2.95	1.08	1.34	41	1.44
2	3.58	1.44	2.88	1.05	1.87	39	1.80
3	1.83	.87	1.61	.50	2.99	40	1.04
4	2.13	1.12	2.35	1.37	1.50	37	.57
5	1.74	.69	2.00	1.00	2.11	38	.93
6	1.88	.74	1.78	.65	1.31	40	.45
7	2.04	1.16	1.88	.86	1.83	39	.51
8	3.33	1.17	2.54	.94	1.54	39	2.26*
9	2.50	1.38	2.22	1.00	1.90	40	.75
10	2.50	.89	2.33	1.09	1.50	40	.53
11	2.83	1.37	2.82	1.13	1.47	39	.03
12	3.79	1.02	3.61	1.09	1.15	40	.55
13	1.83	.70	2.06	.80	1.31	40	.94
14	3.68	1.01	3.56	1.15	1.29	40	.20
15	3.30	1.06	2.94	1.16	1.19	39	1.02
16	3.04	1.26	3.18	1.07	1.38	38	.36

Table 14. Continued

Item (Variable)	RESPONDENTS HAVING One or More Children in School $\overline{X}$	SD	RESPONDENTS HAVING No Children in School $\overline{X}$	SD	F Value	df	T Value
17	1.79	.78	1.83	.71	1.21	40	.18
18	1.83	.96	1.72	.46	4.37**	40	.49
19	2.04	.96	1.69	.48	3.98**	38	1.55
20	3.96	1.20	3.38	1.41	1.38	38	1.36
21	1.92	.83	1.81	.75	1.22	38	.41
22	2.50	1.22	3.00	1.37	1.27	39	1.21
23	2.00	.72	2.44	.89	1.53	38	1.64
24	3.04	1.22	2.40	.99	1.54	36	1.79
25	1.92	.88	1.94	.90	1.04	39	.09
26	1.88	.85	1.81	.40	4.45**	38	.31
27	1.96	.69	1.76	.44	2.49	39	1.10
28	2.21	.98	2.00	.73	1.79	38	.77
29	2.95	1.05	1.88	.81	1.68	36	3.59**
30	2.32	1.17	2.27	1.10	1.13	35	.14
31	2.36	1.26	2.13	1.03	1.50	36	.64
32	2.27	.99	1.75	.68	2.08	36	1.93

Table 14. Continued

Item (Variable	NTS HAVING				F Value	df	T Value
	One or More Children in School		No Children in School				
	$\overline{X}$	SD	$\overline{X}$	SD			
33	1.50	.51	1.62	.51	1.02	33	.65
34	2.41	1.05	2.00	.76	1.94	35	1.37
35	2.27	1.16	2.13	.92	1.61	35	.41
36	2.45	1.01	2.31	.79	1.62	36	.49
37	2.32	0.95	2.36	0.84	1.26	34	0.13
38	2.45	1.14	2.00	0.52	4.90**	36	1.65
39	2.64	1.05	2.75	1.29	1.52	36	0.29
40	3.23	1.19	3.60	1.24	1.08	35	0.91
41	3.09	1.27	3.33	0.72	3.07*	35	0.74
42	2.55	1.26	2.88	1.15	1.21	36	0.84
43	3.14	1.28	3.06	1.06	1.46	36	0.19
44	1.77	0.53	1.81	0.40	1.72	36	0.26
45	1.73	0.46	1.88	0.62	1.84	36	0.81
46	3.32	1.09	3.31	1.40	1.66	36	0.01
47	1.77	0.43	0.94	0.44	1.06	36	1.15
48	2.55	1.34	2.31	1.14	1.38	36	0.58

Table 14. Continued

Item (Variable)	RESPONDENTS HAVING				F Value	df	T Value
	One or More Children in School		No Children in School				
	$\overline{X}$	SD	$\overline{X}$	SD			
49	1.91	0.53	1.67	0.49	1.16	35	1.44
50	1.73	0.46	1.75	0.45	1.04	36	0.15
51	2.05	0.72	1.88	0.50	2.09	36	0.86
52	2.27	1.08	1.88	0.62	3.03*	36	1.44
53	2.05	0.72	1.94	0.57	1.58	36	0.51
54	2.09	1.02	2.00	0.63	2.60	36	0.34
55	2.14	0.83	1.81	0.40	4.28**	36	1.59
56	1.59	0.50	1.75	0.45	1.27	36	1.03

*Significant at the .05 level of confidence.

**Significant at the .01 level of confidence.

[a] Responses were on a five point scale, 1 = Strongly Agree, 5 = Strongly Disagree.

-Groups of citizens should be involved in planning Career Education programs.

-Career Education is meant for all students in a school.

(Less than $3,000 vs over $10,000)

-Studying about jobs helps a student prepare for a good job.

-I would like to see more about Career Education in the newspapers.

-Groups of citizens should be involved in planning Career Education programs.

-The major purpose of Career Education is to help young people learn how to make good (wise) choices that are made freely and on their own.

-If given a choice of teachers, I want my children to have a teacher who practices Career Education.

-The school counselor is important in setting up a Career Education program.

-At the elementary level, Career Education should help children know more about different kinds of jobs.

-Career Education takes place from grade ten through college.

-Career Education is more important for boys than girls.

-Career Education is meant for all students in a school.

($3,000-$10,000 vs over $10,000)

-Helping children know about jobs should be an important part of classes from kindergarten through grade six.

-New rooms and equipment are needed in most schools to start a Career Education program.

-A Career Education program helps our students get along with others.

-Career Education is concerned with helping each student have a better feeling about himself and his own importance.

A listing of all statistics related to responses by income levels can be viewed in Table 15.

Table 15. Responses to the PACE Survey by Selected Residents of the Hazard Region, According to Income Levels[a]

Item (Variable)	YEARLY INCOME LEVEL						T VALUES		
	"A"Less Than $3,000		"B" $3,000 to $10,000		"C" Over $10,000		"A" vs "B" Income Level	"A" vs "C" Income Level	"B" vs "C" Income Level
	$\overline{X}$	SD	$\overline{X}$	SD	$\overline{X}$	SD			
1	2.67	1.53	3.20	1.03	3.44	1.19	0.57	0.85	0.61
2	2.67	1.53	2.80	1.40	3.58	1.27	0.14	0.99	1.53
3	1.00	0.00	2.00	0.82	1.70	0.72	3.87**	5.05**	1.01
4	1.33	0.58	2.00	0.94	2.41	1.34	1.49	2.55	1.03
5	1.00	0.00	1.80	0.63	1.88	0.82	4.00**	5.53**	0.33
6	1.00	0.00	2.20	0.92	1.78	0.51	4.13**	7.98**	1.38
7	1.00	0.00	2.00	0.94	2.04	1.11	3.35**	4.76**	0.10
8	3.00	1.73	2.80	1.14	3.15	1.10	0.19	0.14	0.84
9	2.00	1.73	1.80	0.42	2.67	1.33	0.20	0.65	3.00**
10	3.00	2.00	2.20	0.92	2.48	0.85	0.67	0.44	0.84
11	2.33	1.16	2.30	1.16	3.11	1.28	0.04	1.09	1.84
12	4.33	0.58	3.30	1.06	3.89	1.01	2.19	1.15	1.52
13	1.67	0.58	1.90	0.88	2.00	0.73	0.54	0.92	0.32
14	4.33	0.58	3.40	0.97	3.56	1.12	2.06	1.96	0.42
15	3.33	1.16	2.60	1.08	3.42	1.07	0.98	0.13	2.06
16	3.00	1.73	2.70	1.16	3.28	1.14	0.28	0.27	1.34

Table 15. Continued

Item (Variable)	YEARLY INCOME LEVEL						T VALUES		
	"A" Less Than $3,000		"B" $3,000 to $10,000		"C" Over $10,000		"A" vs "B" Income Level	"A" vs "C" Income Level	"B" vs "C" Income Level
	$\overline{X}$	SD	$\overline{X}$	SD	$\overline{X}$	SD			
17	1.33	0.58	1.60	0.52	1.96	0.81	0.72	1.71	1.61
18	1.33	0.58	1.70	0.48	1.89	0.89	1.00	1.48	0.82
19	1.33	0.58	1.60	0.52	2.12	0.88	0.72	2.09	2.16*
20	2.33	1.16	3.50	1.18	4.08	1.16	1.53	2.47	1.32
21	1.33	0.58	1.70	0.48	2.04	0.89	1.00	1.87	1.45
22	3.33	2.08	2.00	0.47	3.00	1.33	1.10	0.27	3.33**
23	1.67	0.58	2.00	0.00	2.31	0.97	1.00	1.67	1.62
24	1.33	0.58	3.10	1.10	2.96	1.11	3.67**	4.00*	0.34
25	1.00	0.00	2.20	1.14	2.00	0.75	3.34**	6.81**	0.52
26	1.00	0.00	1.70	0.48	2.00	0.76	4.58**	6.55**	1.10
27	1.00	0.00	1.80	0.42	2.00	0.63	6.00**	8.06**	1.10
28	1.33	0.58	1.80	0.42	2.36	1.00	1.30	2.64	2.34*
29	2.20	0.45	2.25	1.06	2.79	1.23	0.14	1.71	1.30
30	1.80	0.45	2.25	1.06	2.33	1.19	1.23	1.55	0.20
31	1.60	0.55	2.42	1.44	2.21	1.03	1.69	1.79	0.43
32	2.60	0.90	1.92	0.90	2.00	0.94	1.43	1.32	0.25

Table 15. Continued

Item (Variable)	YEARLY INCOME LEVEL						T VALUES		
	"A" Less Than $3,000		"B" $3,000 to $10,000		"C" Over $10,000		"A" vs "B" Income Level	"A" vs "C" Income Level	"B" vs "C" Income Level
	$\overline{X}$	SD	$\overline{X}$	SD	$\overline{X}$	SD			
33	1.40	0.55	1.50	0.53	1.61	0.50	0.34	0.78	0.54
34	2.80	1.30	2.08	0.79	2.22	1.00	1.14	0.92	0.42
35	2.60	1.52	1.91	0.94	2.37	1.01	0.94	0.32	1.25
36	2.40	1.14	2.50	1.17	2.37	0.76	0.16	0.06	0.35
37	2.00	0.71	2.27	0.91	2.44	0.98	0.65	1.13	0.48
38	2.80	1.48	2.17	1.19	2.21	0.63	0.85	0.87	0.12
39	2.80	0.84	2.92	1.38	2.47	1.07	0.21	0.73	0.95
40	2.40	0.89	3.36	1.12	2.68	1.25	1.84	2.61*	0.72
41	3.00	0.71	3.36	1.12	3.11	1.20	0.79	0.25	0.59
42	2.40	1.52	2.83	1.34	2.63	1.12	0.56	0.32	0.44
43	3.20	0.84	3.0	1.50	3.11	1.15	0.35	0.21	0.21
44	1.60	0.55	1.83	0.58	1.79	0.42	0.79	0.72	0.23
45	2.00	0.71	1.75	0.62	1.74	0.45	0.69	0.79	0.06
46	2.40	1.14	3.75	1.14	3.32	1.20	2.23	1.58	1.01
47	1.60	0.55	1.83	0.39	1.84	0.38	0.87	0.93	0.06

Table 15. Continued

Item (Variable)	YEARLY INCOME LEVEL						T VALUES		
	"A" Less Than $3,000		"B" $3,000 to $10,000		"C" Over $10,000		"A" vs "B" Income Level	"A" vs "C" Income Level	"B" vs "C" Income Level
	$\overline{X}$	SD	$\overline{X}$	SD	$\overline{X}$	SD			
48	1.60	0.55	2.67	1.30	2.47	1.31	2.38*	2.26*	0.40
49	1.80	0.45	1.91	0.54	1.79	0.54	0.42	0.04	0.59
50	1.40	0.55	1.67	0.49	1.84	0.38	0.94	1.70	1.06
51	1.80	0.45	2.00	0.85	2.00	0.58	0.63	0.83	0.00
52	1.80	0.84	2.08	0.79	2.21	1.08	0.65	0.91	0.38
53	2.40	0.89	1.75	0.45	2.05	0.71	1.54	0.81	1.46
54	1.60	0.55	1.83	0.84	2.26	0.93	0.68	2.04	1.33
55	2.60	1.34	1.83	0.39	1.95	0.62	1.26	1.06	0.63
56	1.40	0.55	1.58	0.52	1.74	0.45	0.64	1.27	0.85

[a] Responses were on a five point scale with 1 = Strongly Agree, 5 = Strongly Disagree.

*Significant at .05 level of confidence.

**Significant at .01 level of confidence.

Chapter 4

FINDINGS
PROFESSIONAL STAFF COMPONENT

The Professional Staff Component was designed to (1) assess the effectiveness of various programs and activities in increasing the knowledge level or attitude of staff member concerning Career Education, (2) to identify factors (of staff and support groups) which contribute to the successful development of Career Education, (3) to identify personnel development techniques considered most effective, and (4) to identify problems encountered in implementing Career Education.

To attain the aforementioned purposes a design was utilized which included pre-post attitude and knowledge measures about Career Education, a questionnaire to ascertain characteristics and problems, and personal interview to further support the research findings.

The findings presented in this chapter were divided into two sections. The first section dealt with the findings obtained from a teacher questionnaire and personal interviews. The second section focused on an analysis of the Career Education Information Inventory. This instrument was administered through a pre-post design and was utilized to ascertain the teacher's level of knowledge and attitude toward Career Education (1) before the first summer workshops in 1973, (2) after the initial two week workshops, and (3) at the conclusion of one year of program operation.

Teacher Questionnaire

The teachers who were active in the Hazard Career Education program were asked to respond to a questionnaire designed to identify characteristics which contribute to the implementation of Career Education, as well as problems encountered in implementation, and techniques/strategies utilized to overcome such barriers. See Appendix C .

Lists of teacher names from the various local educational agencies were secured from the Regional Career Education Staff. A sample of names was selected to receive a mailed questionnaire. A second group was identified for personal interview. The interview was utilized to validate the mailed instrument as well as to gain some further information through a more extensive question/discussion period.

The responses of one hundred forty one personnel were tabulated through one or the other techniques. No attempt was made to force a teacher to complete the instrument, for data illicited from a teacher who had not actively worked in the Career Education program would detract from the value of other teacher data.

Therefore, the population of teachers was all professional education personnel in the Hazard Region. This was reduced to those in attendance at the summer workshops in Hazard or Jackson in 1973, approximately 225 in number. This list was further reduced by eliminating any teacher who did not participate in the Career Education program. However, it should be clarified that most did participate, as well as a great number of teachers who did not attend either workshop.

Results from the survey of professional personnel were cross tabulated by sex, age of respondent, level taught, and by subject area taught (academic/vocational). Because of small cell size, these cross tabulations could not be done simultaneously. However, the basic cross tabulations were done to provide more specific information about the professional staff.

The professional personnel were asked to respond to a series of questions in which they rank ordered a number of items for each question. The mean ranking for each item was calculated and, for purposes of presentation, the items were rank ordered from highest to lowest according to how the total group of respondents reacted to the item.

Presented in Table 16 were the mean rankings and rank orders by sex and total group for whom the personnel considered to be most effective in increasing their knowledge and understanding of Career Education.

Table 16. Teacher Ranking of who was the most Effective in Increasing their Knowledge and Understanding of Career Education by Sex (Individuals Ordered for Total)

Individual(s)	Mean Ranking & Rank Order					
	Males		Females		Total	
	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank
Hazard Region Career Education Staff	1.72	1	1.55	1	1.63	1
System Career Education Coordinator	3.50	2	2.93	2	3.15	2
Teachers from other schools	3.55	3	3.72	3	3.64	3
Teachers in own system	3.82	4	3.96	4	3.90	4
University faculty	4.69	6	4.45	5	4.54	5
Out-of-state consultants	4.68	5	5.04	7	4.85	6
State Department of Education Personnel	4.97	7	4.85	6	4.89	7

As a total group and when considering the sexes independently, the teachers felt that the Regional Career Education Staff was the most effective in helping them gain knowledge about Career Education. Both groups were also consistent in their second, third, and fourth choices. At the lower end of the ranking, there was some disagreement. The females ranked university faculty and state department personnel higher than did the males. The males ranked consultants higher than did the females.

Table 17. Teacher Ranking of who was the most Effective in Increasing their Knowledge and Understanding of Career Education by Teacher Age

Individual(s)	Mean Ranking and Rank Order by Age									
	Under 30		30-39		40-49		Over 50		Total	
	X	Rank	X	Rank	X	Rank	X	Rank	X	Rank
Hazard Region Career Education Staff	1.77	1	1.58	1	1.70	1	1.40	1	1.63	1
System Career Education Coordinator	3.09	2	2.97	2	3.44	2	3.31	2	3.15	2
Teachers from other schools	3.34	3	3.67	3	3.64	3	4.19	5	3.64	3
Teachers in own system	3.66	4	4.11	4	4.05	5	3.86	3	3.90	4
University faculty	4.66	5	5.00	6	3.75	4	4.36	6	4.54	5
Out-of-state consultants	5.21	7	4.50	5	5.06	7	4.63	7	4.85	6
State Department of Education Personnel	5.10	6	5.08	7	4.82	6	4.15	4	4.89	7

The factor of age was also isolated concerning teacher perceptions of who was effective in increasing their knowledge of Career Education. These data were presented in Table 17.

As was the case for sex, the regional staff was rated a high first. The list of individuals was again listed from high to low according to the rank given by the total group, so it that it would be convenient to visualize where the groups differed among themselves and with the total group.

The second choice, System Career Education Coordinator, was constant across groups, but then a few changes in ranking occurred. With the exception of the oldest group of teachers, the group ranked teachers from other schools higher. The older group of teachers considered teachers from their own school to be more effective. They also ranked state department personnel much higher than the other age groups.

Table 18. Teacher Ranking of who was most Effective in Increasing their Knowledge and Understanding of Career Education, by Level Primarily Taught

Individual(s)	Mean Ranking and Rank Order by Level Taught							
	K - 6		7 - 9		10 - 12		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Hazard Region Career Education Staff	1.59	1	1.64	1	1.67	1	1.63	1
System Career Education Coordinator	3.13	2	2.89	2	3.43	2	3.15	2
Teachers from other schools	3.92	4	3.13	3	3.79	3	3.64	3
Teachers in own system	3.72	3	4.04	4	4.00	4	3.90	4
University faculty	4.09	5	4.64	5	5.00	7	4.54	5
Out-of-state consultants	5.00	7	4.77	6	4.76	6	4.85	6
State Department of Education Personnel	4.97	6	5.19	7	4.52	5	4.89	7

Also considered, when ranking who was most effective in increasing the teachers' knowledge and understanding of Career Education, was the level the teacher primarily taught. The levels were divided into elementary (K-6), junior high (7-9), and high school (10-12). These data were presented in Table 18.

The groups were in total agreement on the first two factors, all ranking the Regional Career Education Staff and their System Career Education Coordinator first and second respectively. There were slight differences in the remaining rankings, with the only significant variations being for the 10-12 grade group. They ranked state department of education personnel fifth, whereas the total group ranked them seventh. University faculty were ranked seventh, rather than fifth as by the total group.

Table 19. Teacher Ranking of which Activities were the most Effective in Increasing their Knowledge and Understanding of Career Education by Sex (Activities Order for Total)

Activity	Mean Ranking and Rank Order					
	Males		Females		Total	
	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank
Summer Workshops	1.56	1	1.17	1	1.35	1
Career Education Conferences (sponsored by Hazard Staff)	2.55	2	2.86	2	2.72	2
In-service program in own school	2.93	3	3.24	3	3.13	3
Professional Meetings	4.13	4	4.23	4	4.16	4
Reading Professional Literature	4.30	5	4.35	5	4.31	5
University Courses	4.47	6	4.66	6	4.56	6

Also of interest was a determination of which activities were the most effective in increasing a teacher's knowledge and understanding of Career Education. Presented in Table 19 were mean rankings and rank orders by sex for this variable.

Males and females were in total agreement on the ranking of these activities. Summer workshops ranked first by a wide margin. Conferences and in-service programs in their own school ranked second and third respectively. Professional meetings and reading professional literature followed, and university courses were last.

A fact of importance to be considered was that university courses dealing with Career Education have not been offered, therefore realistically could not have been ranked as being effective.

Table 20. Teacher Ranking of which Activities were the most Effective in Increasing their Knowledge and Understanding of Career Education, by Teacher Age

Activity	Mean Ranking and Rank Order by Age									
	Under 30		30-39		40-49		Over 50		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Summer Workshops	1.33	1	1.31	1	1.38	1	1.40	1	1.35	1
Career Education Conferences (sponsored by Hazard Staff)	2.73	2	2.86	2	2.71	2	2.53	2	2.72	2
In-service Program in own School	3.06	3	3.03	3	3.10	3	3.40	3	3.13	3
Professional Meetings	4.07	4	4.11	5	4.48	5	4.00	4	4.16	4
Reading Professional Literature	4.52	6	4.00	4	4.17	4	4.63	6	4.31	5
University Courses	4.46	5	4.84	6	4.53	6	4.31	5	4.56	6

A slight alteration in rank occurred when considering age groupings of teachers and perceptions of which activities were most effective in increasing their knowledge of Career Education. These data were reported in Table 20 . The first three choices remained constant. However, the younger and older group ranked professional meetings and university courses higher than the middle two age groups. They also ranked reading professional literature lower. Overall, the age groups were in agreement concerning the primary activities.

Table 21. Teacher Ranking of which Activities were the most Effective in Increasing their Knowledge and Understanding of Career Education, by Level Primarily Taught

Activity	Mean Ranking and Rank Order by Level Taught							
	K - 6		7 - 9		10 - 12		Total	
	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank
Summer Workshops	1.47	1	1.12	1	1.42	1	1.35	1
Career Education Conferences (sponsored by Hazard Staff)	2.85	2	2.65	2	2.61	2	2.72	2
In-service Program in Own School	3.17	3	2.90	3	3.29	3	3.13	3
Professional Meetings	4.18	4	4.07	4	4.23	5	4.16	4
Reading Professional Literature	4.24	5	4.53	6	4.17	4	4.31	5
University Courses	4.36	6	4.42	5	4.96	6	4.56	6

Teachers teaching in the various levels varied only slightly in their ranking of which activities were the most effective in increasing their knowledge and understanding of Career Education. These data were presented in Table 21.

Summer workshops, Career Education conferences, and in-service programs in their own schools rank one, two, and three respectively. The high school group ranked reading professional literature somewhat higher than the other two groups. They also ranked professional meetings slightly lower.

Table 22. Teacher Ranking of which Activities were the most Effective in Conveying Career Education Concepts to Students, by Sex

Activity	Mean Ranking and Rank Order by Sex					
	Males		Females		Total	
	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank
Teaching Career Education Units	2.44	1	2.40	1	2.43	1
Field Trips	2.60	2	2.67	2	2.63	2
Using Resource People in Class	2.63	3	3.02	3	2.85	3
Class Projects	2.70	4	3.09	4	2.92	4
Utilizing Career Education Related Examples or Methods to Supplement Regular Material	4.28	5	3.57	5	3.84	5

To be effective, the concepts of Career Education must be conveyed to students. The teachers were asked to indicate which activities were most effective in reaching students. Displayed in Table 22 were the means and rankings by teacher sex for this variable.

Both groups of teachers were in total agreement. Teaching Career Education units was first, followed by field trips, resource persons, and class projects.

Ranked last was utilizing Career Education related examples and methods to supplement regular material. The findings from the personal interviews somewhat contradicted this finding. In the personal interview, the teachers indicated that once they had the concept, they couldn't help but integrate it into all their teaching, because, "it is so much better for communicating relevant material to the students."

Table 23. Teacher Ranking of which Activities were most Effective in Conveying Career Education Concepts to Students, by Teacher Age

Activity	Mean Ranking and Rank Order by Age									
	Under 30		30-39		40-49		Over 50		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Teaching Career Education Units	2.41	2	2.33	1	2.18	1	2.89	4	2.43	1
Field Trips	2.38	1	2.97	4	2.57	2	2.56	1	2.63	2
Using Resource People in Class	2.93	3	2.63	2	3.00	4	2.89	3	2.85	3
Class Projects	3.21	4	2.79	3	2.86	3	2.74	2	2.92	4
Utilizing Career Education Related Examples or Methods to Supplement Regular Materials	3.68	5	4.10	5	4.14	5	3.29	5	3.84	5

When age was isolated as a factor, a somewhat different ranking occurred concerning which methods were most effective with students. Presented in Table 23 were these rankings by age group of teachers.

Utilizing Career Education related examples or methods to supplement regular materials remained last; however, class projects, previously ranked fourth for total, moved to second for the older age group. This group also moved teaching Career Education units to fourth, behind field trips, class projects, and utilizing resource persons in class.

The only other ranking to shift two places from the total ranking was in the 30-39 age group. This group ranked the use of field trips fourth, while it was ranked first or second by the other three groups.

Table 24. Teacher Ranking of which Activities were most Effective in Conveying Career Education concepts to students, by Level Primarily Taught

Activity	Mean Ranking and Rank Order by Level Taught							
	K - 6		7 - 9		10 - 12		Total	
	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank
Teaching Career Education Units	2.66	2	2.09	1	2.48	1	2.43	1
Field Trips	2.27	1	2.90	3	2.89	3	2.63	2
Using Resource Persons in Class	2.95	4	2.75	2	2.81	2	2.85	3
Class Projects	2.85	3	2.90	4	3.04	4	2.92	4
Utilizing Career Education Related Examples or Methods to Supplement Regular Materials	3.95	5	3.76	5	3.78	5	3.84	5

Presented in Table 24 were teacher rankings of which activities were the most effective in conveying Career Education concepts to students, classified according to the grade level taught by the responding teacher.

The teachers consistently ranked utilizing Career Education related examples and methods to supplement regular materials as the poorest method. As indicated earlier, the low ranking could be due to a misunderstanding of the question. The results of personal interviews indicated this to be so.

Field trips were ranked first by the elementary teachers, but third by the junior high and high school teachers. The higher two groups ranked teaching Career Education units as first, followed by using resource persons in class. The elementary group also liked the use of class somewhat better than did the other groups. Self-contained classrooms could account for this difference.

Table 25. Teacher Ranking of the most Effective Method of Securing Resource Persons for a Class, by Sex

Method	Mean Ranking and Rank Order by Sex					
	Males		Females		Total	
	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank
Personal Contact by Teacher	1.86	1	1.72	1	1.77	1
Telephone Contact by Teacher	3.08	2	2.85	2	2.94	2
Personal Contact by Students	3.47	3	3.24	3	3.33	3
Letters Sent by Teacher	4.33	5	4.27	4	4.26	4
Telephone Contact by Students	4.73	6	4.63	5	4.63	5
Letters Sent by Students	4.82	7	4.82	6	4.77	6
Arranged by an Administrator	4.25	~~4~~	5.57	7	5.04	7

One of the recognized methods in Career Education has been the use of resource persons in class. Teachers wishing to secure the services of such individuals might wish to know the methods which have been effective for other teachers.

Presented in Table 25 were the teacher rankings of the most effective methods used in securing resource persons. Males and females were in agreement concerning the three most effective methods for them. Personal contact by the teacher was rated far superior to other methods, followed by telephone contact by the teacher and personal contact by the students.

The total ranking placed arrangement by an administrator as last. However, the male teachers ranked it fourth; females ranked it seventh. With this exception, there was overall agreement.

Table 26. Teacher Ranking of the most Effective Method of Securing Resource Persons for Class, by Teacher Age

Method	Mean Ranking and Rank Order by Age									
	Under 30		30-39		40-49		Over 50		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Personal Contact by Teacher	1.74	1	2.04	1	1.55	1	1.68	1	1.77	1
Telephone Contact by Teacher	2.52	2	3.36	3	2.63	2	3.21	3	2.94	2
Personal Contact by Students	3.65	3	2.80	2	3.80	3	3.07	2	3.33	3
Letters sent by Teacher	4.18	4	4.38	5	4.25	4	4.17	4	4.26	4
Telephone Contact by Students	4.82	6	4.56	6	4.63	6	4.50	6	4.63	5
Letters Sent by Students	4.67	5	4.24	4	5.11	7	5.38	7	4.77	6
Arranged by Administrator	4.86	7	5.64	7	4.88	5	4.50	5	5.04	7

A slightly different pattern emerges when considering the age of the teacher. These data were presented in Table 26. The older teachers were more willing to let an administrator arrange for resource persons. However, this ranking of five may only be considered an indication of their willingness, since the first four were more preferably their choice and were also in agreement with the other age groups. The 30-39 age group ranked letters sent by students slightly higher than did the other three groups.

Differences in ranking were observed between level taught and the teacher rankings of the most effective method of securing resource persons for a class. These data appeared in Table 27.

All groups ranked personal contact by the teacher as the superior method. However, junior high teachers thought personal contact by students to be a better method than telephone contact by teacher, which was ranked second by the two other groups.

Table 27. Teacher Ranking of the most Effective Method of Securing Resource Persons for a Class, by Level Primarily Taught

Method	Mean Ranking and Rank Order by Level Taught							
	K - 6		7 - 9		10 - 12		Total	
	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank
Personal Contact Teacher	1.92	1	1.76	1	1.56	1	1.77	1
Telephone Contact by Teacher	2.83	2	3.10	3	2.88	2	2.94	2
Personal Contact by Students	3.75	3	2.92	2	3.20	3	3.33	3
Letters sent by Teacher	4.17	4	4.43	5	4.17	4	4.26	4
Telephone Contact by Students	4.59	7	4.24	4	5.08	5	4.63	5
Letters Sent by Students	4.59	6	4.73	6	5.08	6	4.77	6
Arranged by Administrator	4.33	5	5.16	7	5.79	7	5.04	7

Other differences in method which were significant enough to mention included telephone contact by students and arrangement by an administrator. As might be expected, the elementary group rated telephone contact by student as the poorest method. They also rated arrangement by an administrator two places higher than did the other two groups. The 7-9 and 10-12 groups both ranked arrangement by an administrator as last. Again, the responsibility of a self-contained classroom may have accounted for this difference.

Teacher rating of the most effective methods of motivating students appeared in Table 28. Male and female teachers were in close agreement by rank order; however, analysis of the size of the mean ranking for the highest ranked method indicated there was a wide range of choices for the first method.

Table 28. Teacher Ranking of the Most Effective Method of Motivating Students, by Sex

Method	Males $\overline{X}$	Males Rank	Females $\overline{X}$	Females Rank	Total $\overline{X}$	Total Rank
Hands-on Class Projects	2.97	1	3.07	1	3.03	1
Field Trips	3.38	3	3.31	2	3.34	2
Resource Persons in Class	3.15	2	4.11	3	3.71	3
Teacher Enthusiasm for Career Education	4.17	4	4.17	4	4.17	4
Role Playing	5.16	5	4.93	5	5.02	5
Group Work	5.24	6	5.50	6	5.39	6
Career Corners	6.58	8	6.11	7	6.28	7
Bulletin Boards	6.11	7	6.56	8	6.39	8
Films and Filmstrips	6.75	9	6.66	9	6.70	9
Doing Research and Written Reports on Occupations	6.85	10	7.60	10	7.30	10

Mean Ranking and Rank Order by Sex

Hands-on class projects received more first place ratings and was ranked as the most effective method. Field trips and use of resource persons also received a number of first place ranks, but averaged to second and third place rankings respectively.

Written reports, films and filmstrips, and bulletin boards were not rated as effective by either group.

Teacher rankings of effective methods of motivating students were also tabulated for various teacher age groups. These data appeared in Table 28a. Only a few changes from the rank order for total resulted.

Table 28a. Teacher Ranking of the most Effective Method of Motivating Students, by Teacher Age

Method	Under 30		30-39		40-49		Over 50		Total	
	X̄	Rank	X̄	Rank	X̄	Rank	X̄	Rank	X̄	Rank
Hands-on Class Projects	3.25	3	3.17	1	2.68	1	2.89	1	3.03	1
Field Trips	2.93	1	3.56	2	3.45	2	3.50	2	3.34	2
Resource Persons in Class	3.11	2	3.71	3	4.19	3	4.01	4	3.71	3
Teacher Enthusiasm for Career Education	4.12	4	4.15	4	4.62	4	3.69	3	4.17	4
Role Playing	5.10	5	4.96	5	4.71	5	5.35	6	5.02	5
Group Work	5.50	6	5.07	6	5.36	6	5.80	7	5.39	6
Career Corners	6.88	8	6.77	9	5.67	7	5.33	5	6.28	7
Bulletin Boards	7.00	9	5.55	7	6.50	8	6.81	8	6.39	8
Films and Filmstrips	6.27	7	6.74	8	6.90	10	7.06	9	6.70	9
Doing Research and Written Reports on Occupations	7.20	10	7.63	10	6.89	9	7.40	10	7.30	10

Mean Ranking and Rank Order by Age

The younger age group of teachers ranked hands-on class projects as third, rather than first as did the other groups. They ranked field trips first and resource persons second. They also ranked the use of films and filmstrips higher than the older groups.

The use of career corners varied between two of the groups. This method was ranked seventh by the total group; however, the 30-39 age group ranked it ninth and the older age group ranked it fifth. Other rankings conformed quite well to the ranking of the groups as a total body.

Several differences in teacher rankings were observed when considering level taught and the most effective methods of motivating students. These data appeared in Table 29.

Table 29. Teacher Ranking of the most Effective Method of Motivating Students, by Level Primarily Taught.

Method	Mean Ranking and Rank Order by Level Taught						Total	
	K - 6		7 - 9		10 - 12			
	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank
Hands-on Class Projects	2.87	2	2.71	1	3.61	2	3.03	1
Field Trips	2.76	1	3.63	4	3.82	4	3.34	2
Resource Persons in Class	4.29	3	3.07	2	3.69	3	3.71	3
Teacher Enthusiasm for Career Education	5.63	6	3.48	3	3.21	1	4.17	4
Role Playing	4.68	4	4.96	6	5.52	6	5.02	5
Group Work	5.91	7	4.69	5	5.46	5	5.39	6
Career Corners	4.73	5	7.17	9	7.65	10	6.28	7
Bulletin Boards	6.28	8	6.26	8	6.67	8	6.39	8
Films and Filmstrips	7.23	9	6.81	7	5.93	7	6.70	9
Doing Research and Written Reports on Occupations	7.41	10	7.19	10	7.27	9	7.30	10

Hands-on class projects received the highest overall ranking; however, the K-6 and 10-12 groups both ranked it second. Second overall was field trips, but again differences were observed among groups. The elementary teachers ranked this method first, but the junior high and high school groups rated field trips as fourth.

Differences were also observed for the variable teacher enthusiasm for Career Education. The K-6 group ranked it sixth, the 7-9 group ranked it third, and the 10-12 group ranked it first. Differences were also observed for the use of career corners. The K-6 teachers ranked it fifth, but the other two groups ranked it ninth and tenth respectively.

Table 30. Teacher Ranking of the most Important Determiner of Program Success in Career Education, by Sex.

Determiner	Mean Ranking & Rank Order by Sex					
	Males		Females		Total	
	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Total
In-service Education Prior to Implementation	2.31	1	1.79	1	2.00	1
Administrative Support	2.86	3	2.79	2	2.82	2
Leadership from a Source Such as the Regional Career Education Staff	2.66	2	2.98	3	2.85	3
Parental and Community Support	3.86	5	3.56	4	3.68	4
Prepared Instructional Materials	3.82	4	3.80	5	3.81	5
Special Facilities	5.08	6	5.40	6	5.27	6

Any planning for a Career Education program should consider what teachers, who have participated in a program, felt were the most important determiners of program success. These findings were presented in Table 30.

The determiner which received the highest ranking by both male and female teachers was a good program of in-service education prior to program implementation. Administrative support for the program and its staff ranked second. However, the male teachers tended to place a higher rank on a Career Education support staff such as that provided through the Regional Office. The data gathered through personal interview confirmed in-service and administrative support as being the most crucial, although they also indicated that in a regional project it would be difficult to consistently have the first two without the regional support staff.

Needing special facilities ranked last for both groups. The necessity of prepared instructional materials ranked next to last.

Table 31. Teacher Ranking of the most Important Determiner of Program Success in Career Education, by Teacher Age

Determiner	Mean Ranking and Rank Order by Age									
	Under 30		30-39		40-49		Over 50		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
In-service Education Prior to Implementation	2.32	1	1.81	1	1.75	1	2.11	1	2.00	1
Administrative Support	2.43	2	3.03	3	3.26	3	2.53	2	2.82	2
Leadership from a Source Such as the Regional Career Education Staff	2.67	3	3.00	2	2.86	2	2.84	3	2.85	3
Parental and Community Support	3.65	4	3.68	5	3.96	5	3.31	4	3.68	4
Prepared Instructional Materials	3.92	5	3.48	4	3.61	4	4.50	5	3.81	5
Special Facilities	5.08	6	5.63	6	5.05	6	5.21	6	5.27	6

When considering the age of the teachers, few differences were observed in their rankings of determiners of program success. Analysis of Table 31 revealed the consistency of the rankings by age group. No item for any age group varied more than one place from its rank for total teacher group.

The need for in-service education prior to program implementation remained number one. The older and younger groups viewed administrative support and parental and community somewhat more important than the middle two age groups. The middle two groups ranked a Career Education support staff and the need for prepared instructional materials more favorably than did the older and younger groups. All age groups ranked the need for special facilities as the least important.

Table 32. Teacher Ranking of the most Important Determiner of Program Success in Career Education, by Level Primarily Taught

Determiner	Mean Ranking and Rank Order by Level Taught							
	K - 6		7 - 9		10 - 12		Total	
	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank
In-service Education Prior to Implementation	1.74	1	1.97	1	2.34	1	2.00	1
Administrative Support	3.42	3	2.45	2	2.44	2	2.82	2
Leadership from a Source Such as the Regional Career Education Staff	2.36	2	2.91	3	3.38	3	2.85	3
Parental and Community Support	3.46	4	3.85	5	3.79	5	3.68	4
Prepared Instructional Materials	4.08	5	3.54	4	3.72	4	3.81	5
Special Facilities	5.36	6	5.25	6	5.17	6	5.27	6

The teachers across the various teaching levels were very consistent in their rankings of the most important determiners of program success in Career Education. These data were presented in Table 32.

All groups ranked in-service education prior to implementation as the most important factor. Administrative support was also ranked high. This was one factor which was most frequently mentioned during the personal interviews. The elementary teachers ranked leadership from a source such as the Regional Career Education Staff, and parental and community support somewhat higher than the other groups.

One feels more comfortable in seeking advice from someone perceived as having more knowledge than others on a subject. In addition, uninformed publics should be made knowledgeable.

The teachers were asked their opinion of how knowledgeable they considered various publics to be about Career Education. These results were presented in Table 33. The list of 11 publics was ordered from the one receiving the highest average rating on a five point Likert-type scale by the total group of teachers to the one receiving the lowest rating.

Table 33. Teacher Opinion of how Knowledgeable Various Publics were about Career Education, by Sex (opinion recorded on a 1, high, to 5, low, scale)

Publics	Mean Ratings and Rank Order by Sex Males		Females		Total	
	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank
Hazard Region Career Education Staff	1.15	1	1.33	1	1.26	1
Summer Workshop Participants	1.43	2	1.60	2	1.54	2
Respondent Herself/Himself	1.56	3	1.80	3	1.71	3
Respondent's Building Principal	1.67	4	1.85	5	1.79	4
Counselors (as a total group)	1.78	6	1.84	4	1.82	5
Administrators (as a total group)	1.91	7	1.97	6	1.95	6
Counselor in Respondent's School	1.76	5	2.09	7	1.97	7
Teachers (as a total group)	2.32	8	2.29	8	2.30	8
Teachers in Respondent's School	2.39	9	2.36	10	2.38	9
Parents	3.61	10	3.34	9	3.44	10
Community	3.69	11	3.36	11	3.48	11

The ordering by sex varied little from the ordering for the total group. It was, however, important to consider the overall ordering.

The Regional Career Education Staff ranked first and the summer workshop participants ranked second. It was consistent that the respondents should rank themselves third, for they in fact were the summer workshop participants and the teachers primarily participating in the Career Education program during the school year. They ranked their building principal fourth, above counselors and administrators as total groups. Teachers as a total group were ranked very low; however not as low as were teachers from the respondent's own school. This seemed to indicate that the teachers didn't feel adequate support from their own building colleagues. The personal interviews supported this feeling. A few teachers who were judged by the regional staff to be among the most effective in working in the Career Education program confessed they felt "shut off" from a few other teachers because of success with students and other teachers not wanting the "extra work of Career Education" to become a building policy. Teachers also rated counselors as a total group higher than the counselor in their own school. It could be that "things look greener on the other side of the fence."

Parents and community received the lowest teacher ratings concerning their knowledge of Career Education. Since the other publics were all educational personnel, this was no surprise. Also, the Regional Career Education Staff indicated that community involvement was not among the top priorities during the first year of operation.

When considering the age of the teacher and who he or she thought to be most knowledgeable about Career Education, a slightly different, yet consistent, pattern was revealed. These data appeared in Table 34. Only those ratings which differed significantly from the total ratings were discussed.

The Under 30 group didn't rate themselves to be as knowledgeable about Career Education as did the total group. As a group, they ranked themselves fifth rather than third as was the case when considering all teachers. They also ranked the counselor in their school much higher than did the other groups.

Table 34. Teacher Opinion of how Knowledgeable Various Publics were about Career Education, by Teacher Age (opinion recorded on a 1, high, to 5, low, scale).

Publics	Mean Rating and Rank Order by Age									
	Under 30		30-39		40-49		Over 50		Total	
	X	Rank	X	Rank	X	Rank	X	Rank	X	Rank
Hazard Region Career Education Staff	1.26	1	1.16	1	1.43	1	1.21	1	1.26	1
Summer Workshop Participants	1.37	2	1.47	2	1.78	3	1.63	2	1.54	2
Respondent Herself/Himself	1.65	5	1.76	3	1.80	4	1.65	3	1.71	3
Respondent's Building Principal	1.38	3	1.81	4	2.17	7	1.89	4	1.79	4
Counselors (as a total group)	1.69	6	1.82	5	1.68	2	2.19	5	1.82	5
Administrators (as a total group)	1.76	7	1.96	6	1.95	5	2.22	6	1.95	6
Counselor in Respondent's School	1.56	4	1.96	7	2.10	6	2.62	8	1.97	7
Teachers (as a total group)	1.90	9	2.32	8	2.68	9	2.47	7	2.30	8
Teachers in Respondent's School	1.79	8	2.46	9	2.68	10	2.82	9	2.38	9
Parents	3.32	10	3.50	10	3.64	8	3.33	10	3.44	10
Community	3.33	11	3.69	11	3.25	11	3.65	11	3.48	11

A few differences were also observed for the 40-49 age group. They ranked their building principal much lower. They also ranked counselors as a total group very high, second, and ranked parents somewhat higher in knowledge than did the other groups.

Table 35. Teacher Opinion of how Knowledgeable Various Publics were About Career Education, by Level Primarily Taught, (opinion recorded on a 1, high, to 5, low, scale)

Publics	Mean Rating and Rank Order by Level Taught							
	K - 6		7 - 9		10 - 12		Total	
	X	Rank	X	Rank	X	Rank	X	Rank
Hazard Region Career Education Staff	1.24	1	1.39	1	1.14	1	1.26	1
Summer Workshop Participants	1.55	2	1.63	2	1.43	2	1.54	2
Respondent Herself/Himself	1.68	3	1.90	4	1.57	3	1.71	3
Respondent's Building Principal	1.76	4	2.00	5	1.59	4	1.79	4
Counselors (as a total group)	1.95	5	1.85	3	1.59	5	1.82	5
Administrators (as a total group)	2.00	6	2.08	7	1.74	7	1.95	6
Counselor in Respondent's School	2.18	7	2.04	6	1.66	6	1.97	7
Teachers (as a total group)	2.30	8	2.41	8	2.19	8	2.30	8
Teachers in Respondent's School	2.30	9	2.59	9	2.26	9	2.38	9
Parents	3.38	11	3.52	10	3.47	10	3.44	10
Community	3.35	10	3.59	11	3.56	11	3.48	11

The level the teacher taught was also isolated when considering teacher opinion of how knowledgeable various publics were about Career Education. These ratings were presented in Table 35.

All groups rated the regional staff as being the most knowledgeable and the summer workshop participants next highest. Other ratings were about the same across groups, with only slight variation. Overall, the 10-12 group gave higher ratings to each variable, but the ordering of these ratings was consistent with the other groups.

Table 36. Teacher Opinion of how Positive an Attitude Various Publics had Toward Career Education, by Sex, (opinion recorded on a 1, high, to 5, low scale)

Publics	Mean Ratings & Rank Order by Sex					
	Males		Females		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Hazard Region Career Education Staff	1.15	1	1.48	2	1.35	1
Respondent Himself/Herself	1.45	2	1.40	1	1.44	2
Summer Workshop Participants	1.54	3	1.69	3	1.67	3
Respondent's Building Principal	1.62	5	1.77	4	1.72	4
Counselor in Respondent's School	1.61	4	1.91	5	1.79	5
Counselors (as a total group)	1.80	6	1.95	6	1.90	6
Administrators (as a total group)	1.92	7	2.02	7	1.97	7
Teachers in Respondent's School	2.41	8	2.42	8	2.43	8
Teachers (as a total group)	2.49	9	2.72	10	2.63	9
Parents	2.66	11	2.67	9	2.67	10
Community	2.61	10	2.78	11	2.71	11

The teachers were further asked who they felt possessed the most positive attitude toward Career Education. These data were presented in Table 36. As was the case with knowledge, the Regional Career Education Staff was ranked first by the total group, although the female teachers rated their own attitude slightly higher.

Table 37. Teacher Opinion of how Positive an Attitude Various Publics had Toward Career Education, by Teacher Age (opinion recorded on a 1, high to 5, low, scale)

Publics (ordered from most to least positive by total)	Mean Opinion Rating by Age									
	Under 30		30-39		40-49		Over 50		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Hazard Region Career Education Staff	1.19	1	1.45	1	1.50	2	1.26	1	1.35	1
Respondent Himself/Herself	1.47	3	1.55	2	1.38	1	1.29	2	1.44	2
Summer Workshop Participants	1.72	5	1.58	3	1.75	3	1.61	3	1.67	3
Respondent's Building Principal	1.41	2	1.77	4	1.86	5	1.94	4	1.72	4
Counselor in Respondent's School	1.57	4	1.77	5	1.95	7	2.08	5	1.79	5
Counselors (as a total group)	1.86	7	1.79	6	1.84	4	2.27	6	1.90	6
Administrators (as a total group)	1.77	6	1.96	7	1.86	6	2.44	7	1.97	7
Teachers in Respondent's School	2.17	8	2.31	8	2.42	8	3.12	11	2.43	8
Teachers (as a total group)	2.37	9	2.39	9	3.09	11	2.88	9	2.63	9
Parents	2.41	10	2.74	10	2.70	9	2.94	10	2.67	10
Community	2.66	11	2.82	11	2.67	10	2.69	8	2.71	11

When controlling for teacher age, a slightly different pattern of ratings was observed concerning who the teachers felt possessed the most positive attitude toward Career Education. These ratings appeared in Table 37. Only differences from the total ratings were discussed.

The younger teachers rated the summer workshop participants lower than did the total group. They also rated their own building principal higher, second behind the Regional Career Education Staff.

Three significant shifts occurred for the 40-49 group. They rated counselors as a total group as possessing a higher attitude than did the other groups; however, they rated their own counselor lower. This group also placed teachers as a total group last in positive attitude toward Career Education and themselves as first, or possessing the most positive attitude of any publics considered.

The level taught was also isolated as a factor when considering teacher opinions of the attitude toward Career Education displayed by various publics. These data were presented in Table 38.

The teachers from all levels were consistent in rating the Hazard Staff and themselves as first and second, with the elementary group rating their attitude as the highest. The junior high group rated their building principal and counselor lower than did any of the other groups. They rated counselors and administrators as total groups higher than their own.

Other differences were observed in the responses of high school teachers. They were in agreement until the lower end of the listing, then placed parents two to three places above the other groups' ratings. They also rated teachers as a total group as possessing the poorest attitude of those considered.

Table 38. Teacher Opinion of how Positive an Attitude Various Publics had Toward Career Education, by Level Taught (opinion recorded on a 1, high, to 5, low, scale)

Publics	Mean Rating and Rank Order by Level Taught							
	K - 6		7 - 9		10 - 12		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Hazard Region Career Education Staff	1.42	2	1.34	1	1.25	1	1.35	1
Respondent Herself/Himself	1.37	1	1.65	2	1.33	2	1.44	2
Summer Workshop Participants	1.65	3	1.79	3	1.55	4	1.67	3
Respondent's Building Principal	1.65	4	2.00	6	1.50	3	1.72	4
Counselor in Respondent's School	1.82	5	2.00	7	1.57	5	1.79	5
Counselors (as a total group)	2.00	6	1.96	4	1.69	6	1.90	6
Administrators (as a total group)	2.00	7	1.96	5	1.92	7	1.97	7
Teachers in Respondent's School	2.38	8	2.43	8	2.52	9	2.43	8
Teachers (as a total group)	2.54	9	2.65	9	2.75	11	2.63	9
Parents	2.76	10	2.82	11	2.37	8	2.67	10
Community	2.79	11	2.72	10	2.58	10	2.71	11

Table 39. Teacher Opinion Concerning the Severity of Various Problems Encountered in Implementing the Career Education Program, by Sex (opinion recorded on a 1, no problem, to 4, much problem, scale)

Problems	Mean Rating and Rank Order by Sex					
	Males		Females		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Insufficient funds to purchase materials	3.21	1	3.11	2	3.15	1
Insufficient time to plan with other teachers	2.82	3	3.21	1	3.04	2
Insufficient funds for field trips	3.03	2	2.87	4	2.93	3
Insufficient individual planning time	2.56	6	2.91	3	2.79	4
Other teachers not accepting Career Education	2.77	4	2.66	7	2.69	5
Availability of appropriate Career Education materials for students	2.45	9	2.82	5	2.67	6
Other teachers willing to participate	2.63	5	2.66	8	2.63	7
Availability of Career Education teacher materials	2.38	10	2.73	6	2.61	8
Negative opinions of Career Education from other faculty/administration	2.46	7	2.34	12	2.39	9
Teachers not being involved in decision-making	2.26	11	2.45	9	2.38	10
Not having sufficient facilities in which to conduct Career Education activities	2.55	8	2.28	14	2.37	11
Finding resource people with time to come to school and talk with students	2.15	13	2.37	10	2.30	12
Availability of sufficient in-service training	2.00	20	2.36	11	2.25	13

Table 39, cont'd.

Problems	Mean Rating and Rank Order by Sex					
	Males		Females		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Availability of school time for speakers and field trips	2.08	16	2.29	13	2.20	14
Obtaining quality resource people	2.08	17	2.24	15	2.16	15
Organizing field trips	2.20	12	2.10	16	2.15	16
Differing student interests and aptitudes	2.13	15	2.02	17	2.06	17
Continuation of the program for next year	2.05	18	1.92	19	1.97	18
Class size too large to achieve objectives	2.15	14	1.80	25	1.97	19
Achieving both Career Education and academic objectives	2.03	19	1.90	21	1.95	20
Not completing Career Education objectives because of a need to complete other important school objectives	1.95	22	1.97	18	1.95	21
Knowledge of places to schedule field trips	1.90	24	1.92	20	1.91	22
Integrating Career Education into the existing curriculum	1.93	23	1.89	22	1.91	23
Evaluating students' growth in Career Education	1.98	21	1.87	23	1.91	24
Feeling confident in teaching a Career Education unit	1.79	25	1.83	24	1.86	25
Being able to interest students in Career Education concepts	1.73	26	1.66	26	1.69	26

One of the major purposes of the study was to ascertain problems which the teachers encountered in implementing Career Education. Presented in Table 39 were teacher ratings as to whether each potential problem listed on the questionnaire was (1) No Problem, (2) Little, (3) Some, or (4) Much Problem. Twenty-six potential problems were listed in the order of severity as rated by the teachers. They were originally obtained from interviewing teachers and by reviewing previous research. The teachers were also asked to list the most significant problems they encountered. These open end responses will be discussed later in this chapter.

The most difficult problem encountered by teachers was a lack of sufficient funds to purchase materials. Other problems in the top quarter of those listed included insufficient time to plan with other teachers or individually, insufficient funds for field trips, a feeling that other teachers weren't accepting Career Education, and the availability of appropriate Career Education materials for students.

Areas in which the teachers experienced little difficulty included being able to interest students in Career Education, feeling competent when teaching, evaluating student growth in Career Education, integrating Career Education into the existing curriculum, and knowing where field trips could be scheduled. They also felt little difficulty in meeting the project'sCareer Education objectives as well as the academic objectives they had set forth. Refer to table 39 for the complete listing, including mean ratings by sex.

Table 40. Teacher Opinion Concerning the Severity of Various Problems Encountered in Implementing the Career Education Program, by Teacher Age (opinion recorded on a 1, no problem to 4, much problem, scale)

Problems (ordered from most to last severe by total)	Mean Rating of Severity by Age									
	Under 30		30-39		40-49		Over 50		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Insufficient funds to purchase materials	2.94	2	3.10	1	3.23	1	3.47	1	3.15	1
Insufficient time to plan with other teachers	3.00	1	2.93	3	3.24	2	3.06	4	3.04	2
Insufficient funds for field trips	2.81	4	3.00	2	2.76	6	3.24	2	2.93	3
Insufficient individual planning time	2.90	3	2.79	4	2.36	15	3.11	3	2.79	4
Other teachers not accepting Career Education	2.43	6	2.65	7	2.91	3	2.94	7	2.69	5
Availability of appropriate Career Education materials for students	2.38	7	2.69	6	2.83	4	2.94	8	2.67	6
Other teachers willing to participate	2.30	11	2.65	8	2.77	5	3.00	5	2.63	7
Availability of Career Education teacher materials	2.38	8	2.79	5	2.48	10	2.89	9	2.61	8
Negative opinions of Career Education from other faculty/ administration	2.10	14	2.39	9	2.65	7	2.61	11	2.39	9
Teachers not being involved in decision-making	2.32	10	2.04	15	2.57	9	2.74	10	2.38	10
Not having sufficient facilities in which to conduct Career Education activities	1.94	20	2.28	10	2.59	8	3.00	6	2.37	11

Table 40, Cont'd.

Problems (ordered from most to last severe by total)	Mean Rating of Severity by Age								Total	
	Under 30		30-39		40-49		Over 50			
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Finding resource people with time to come to school and talk with students	2.52	5	2.07	14	2.41	13	2.16	16	2.30	12
Availability of sufficient in-service training	2.09	15	2.14	12	2.39	14	2.53	12	2.25	13
Availability of school time for speakers and field trips	2.25	12	2.14	13	2.43	11	1.95	20	2.20	14
Obtaining quality resource people	2.19	13	1.90	20	2.43	12	2.21	15	2.16	15
Organizing field trips	2.34	9	2.17	11	1.86	21	2.11	17	2.15	16
Differing student interests and aptitudes	2.10	16	1.97	18	2.09	16	2.11	18	2.06	17
Continuation of the program for next year	1.81	25	1.87	21	2.05	17	2.32	13	1.97	18
Class size too large to achieve objectives	2.09	17	1.97	17	1.81	23	1.95	21	1.97	19
Achieving both Career Education and academic objectives	1.94	21	1.83	24	1.81	24	2.32	14	1.95	20
Not completing Career Education objectives because of a need to complete other important school objectives	1.87	23	2.00	16	1.90	20	2.05	19	1.95	21
Knowledge of places to schedule field trips	2.06	18	1.86	22	1.74	26	1.95	22	1.91	22
Integrating Career Education into the existing curriculum	1.84	24	1.97	19	1.96	19	1.89	23	1.91	23
Evaluating students' growth in Career Education	1.90	22	1.86	23	2.04	18	1.84	24	1.91	24

Table 40, Cont'd.

Problems (ordered from most to last severe by total)	Mean Rating of Severity by Age									
	Under 30		30-39		40-49		Over 50		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Feeling confident in teaching a Career Education unit	1.97	19	1.79	25	1.81	25	1.84	25	1.86	25
Being able to interest students in Career Education concepts	1.53	26	1.64	26	1.86	22	1.79	26	1.69	26

The severity of potential problems to the implementation of Career Education was also analyzed by teacher age group. A few differences were observed. These data were presented in Table 40.

The age groups conformed individually to the total ratings with a few exceptions. These exceptions were briefly discussed. The table contained a complete listing, with group mean ratings.

The younger group did not see participation in decision-making to be as great a problem as did the older groups, although none of the groups considered it to be a severe problem. They felt that organizing field trips and class size were more difficult. They also felt they lacked the knowledge of where to go on field trips.

The 30-39 group included a lack of Career Education teacher material as a handicap. They also ranked involvement in decision-making as less of a problem than did the older teachers.

The 40-49 year group registered lack of individual planning time as less of a problem than did any other group. They also indicated no problem in organizing field trips or knowing where to go. However, they did indicate more problem in integrating Career Education into the existing curriculum and in evaluating student growth.

The older group of teachers were more concerned with a lack of faciliti for Career Education than were the younger groups. They were also more concerned about being able to achieve both Career Education and academic objectives simultaneously.

Table 41. Teacher Opinion Concerning the Severity of Various Problems Encountered in Implementing the Career Education Program, by Level Taught (opinion recorded on a 1, no problem, to 4, much problem, scale)

Problems	Mean Rating and Rank Order by Level Taught							
	K - 6		7 - 9		10 - 12		Total	
	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank	$\overline{X}$	Rank
Insufficient funds to purchase materials	3.20	1	3.00	2	3.26	1	3.15	1
Insufficient time to plan with other teachers	3.02	2	3.09	1	3.00	3	3.04	2
Insufficient funds for field trips	2.79	6	2.91	3	3.15	2	2.93	3
Insufficient individual planning time	2.93	3	2.82	4	2.56	6	2.79	4
Other teachers not accepting Career Education	2.59	8	2.82	5	2.71	5	2.69	5
Availability of appropriate Career Education materials for students	2.88	4	2.62	7	2.43	8	2.67	6
Other teachers willing to participate	2.54	9	2.67	6	2.74	4	2.63	7
Availability of Career Education teacher materials	2.83	5	2.50	9	2.43	9	2.61	8
Nagative opinions of Career Education from other faculty/administration	2.20	14	2.56	8	2.46	7	2.39	9
Teachers not being involved in decision-making	2.71	7	2.06	15	2.24	12	2.38	10
Not having sufficient facilities in which to conduct Career Education activities	2.43	12	2.44	11	2.21	16	2.37	11
Finding resource people with time to come to school and talk with students	2.45	11	2.09	13	2.33	11	2.30	12
Availability of sufficient in-service training	2.46	10	2.03	16	2.21	17	2.25	13

Table 41, Cont'd.

Problem	Mean Rating and Rank Order by Level Taught							
	K - 6		7 - 9		10 - 12		Total	
	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank	$\bar{X}$	Rank
Availability of school time for speakers and field trips	1.83	23	2.47	10	2.43	10	2.20	14
Obtaining quality resource people	2.37	13	1.97	18	2.10	20	2.16	15
Organizing field trips	1.95	17	2.30	12	2.24	13	2.15	16
Differing student interests and aptitudes	2.10	16	2.09	14	1.96	22	2.06	17
Continuation of the program for next year	1.93	20	2.00	17	2.00	21	1.97	18
Class size too large to achieve objectives	2.12	15	1.85	21	1.89	24	1.97	19
Achieving both Career Education and academic objectives	1.90	22	1.79	23	2.22	15	1.95	20
Not completing Career Education objectives because of a need to complete other important school objectives	1.95	18	1.97	19	1.93	23	1.95	21
Knowledge of places to schedule field trips	1.69	25	1.97	18	2.14	19	1.91	22
Integrating Career Education into the existing curriculum	1.93	21	1.71	25	2.15	18	1.91	23
Evaluating students' growth in Career Education	1.75	24	1.82	22	2.26	14	1.91	24
Feeling confident in teaching a Career Education unit	1.95	19	1.79	24	1.97	26	1.86	25
Being able to interest students in Career Education concepts	1.63	26	1.68	26	1.80	25	1.69	26

Presented in Table 41 were teacher ratings of the severity of various problems encountered in implementing the Career Education program when considering the level taught.

Insufficient funds to purchase materials was rated as the most severe problem by the K - 6 and the 10 - 12 groups. The junior high teachers placed it second behind insufficient time to plan with other teachers. Funds for field trips was more of a problem for the 10 - 12 group.

Most problems identified were fairly consistent across level taught. A few exceptions were noted. The elementary group didn't see negative opinions from other faculty/administration to be as great a problem as did the other groups. However, they considered teachers not being involved in decision-making as more of a problem.

The high school teachers rated evaluating students' growth in Career Education to be more of a problem than did the elementary or junior high group. Quite a large difference in mean ratings also occurred for the problem "availability of school time for speakers and field trips." The elementary teachers rated it as being no problem. However, the other two groups rated it as providing them some problem. This difference across groups was as expected, since the elementary teachers had direct control over the entire school day.

None of the groups found it a problem to interest students in Career Education concepts nor in feeling confident when teaching Career Education units. Class size was considered to be more of a problem for the elementary teachers and the high school groups considered the lack of special facilities to be a problem.

To provide descriptive information concerning program operation, the teachers were asked how many field trips they took and how many resource persons visited their class during the past school year. These data were presented for sex, for teacher age, and for level taught.

Table 42. Number of Field Trips and Resource Persons, by Teacher Sex

Activity	Mean Number by Sex Males	Females	Total
Field Trips	3.14	3.18	3.16
Resource Persons	5.68	4.33	4.88

Table 43. Number of Field Trips and Resource Persons, by Teacher Age

	Mean Number by Teacher Age				
Activity	Under 30	30-39	40-49	Over 50	Total
Field Trips	2.79	2.62	2.35	5.80	3.16
Resource Persons	3.36	5.04	4.62	7.47	4.88

Table 44. Number of Field Trips and Resource Persons, by Level Taught

	Mean Number by Level Taught			
Activity	K - 6	7 - 9	10 - 12	Total
Field Trips	3.71	2.29	3.41	3.16
Resource Persons	5.13	4.38	5.08	4.88

Presented in Table 42 were the mean number of field trips and resource persons used, by teacher sex. Both groups took about the same number of field trips, 3.14 and 3.18 respectively. The male teachers utilized a few more resource persons. The males averaged the use of 5.68 resource persons while the females averaged 4.33 resource persons per class.

Teacher age was isolated as a variable when considering the number of field trips and resource persons. These data appeared in Table 43. As a group, the older teachers took more field trips. Earlier, it was stated they perceived little problem in knowing where to go or organizing a field trip. This, no doubt, would be due to their longer tenure in the community. They also utilized more resource persons. The younger age group used the fewest.

When considering level taught, Table 44, only slight differences were observed. The junior high teachers made the fewest field trips, averaging 2.29 trips per teacher. The elementary teachers made the most trips, 3.71 per teacher.

Concerning use of resource persons, the K-6 group utilized an average of 5.13 person per class, followed by the 10-12 group who used an average of 5.08 resource persons. As with field trips, the junior high group was lowest, using an average of 4.38 resource persons per class.

In addition to the questionnaire items discussed above, the teachers were asked to respond to the open-end question, "What were the two (2) most significant problems you encountered in implementing Career Education?" The responses to that question were summarized and presented in narrative form.

The question yielded ten basic responses which were categorized as follows: (from most to least frequently mentioned)

1. Class and planning time
2. Materials and supplies available
3. Teacher interest
4. Difficulties in program implementation
5. Transportation
6. Funds available
7. Resource people
8. Field trips
9. Teacher understanding
10. Community involvement

Further study of each of these ten areas revealed significant information for discussion.

In trying to cover Career Education materials, teachers discovered that the units were often too long to work into a regular school day, in addition to a felt inability to schedule Career Education into the class schedule. Teachers, furthermore, had to contend with insufficient class time for preparing materials and in working with co-workers in the implementation of these programs. Another obstacle teachers encountered was the lack of relevant, selective materials and training films necessary to the teaching of Career Education. Unavailability of rooms prevented the students from working with and displaying their units.

Even though interest was high among the students toward Career Education, this same interest and involvement was difficult to elicit from the administrators, principals, and other teachers who were not involved with Career Education. Therefore, team efforts including cooperation of other personnel were not overly successful along with the unsuccessful recruitment of quality teachers to participate in the Career Education program.

Implementation of the Career Education program presented another felt obstacle to teachers. Having to write Career Education units into an acceptable form, coordinating these units, and then integrating these units into the curriculum proved to be a tedious task. The relevance of these units to all students needed considertation. This was discovered when the first units did not meet the needs of the primary students due to their level of difficulty. Flexibility, however, was the most necessary and important ingredient in this program.

Arranging a field trip meant obtaining permission of the administration, finding available time for the field trip, and being able to schedule it in the time slot. However, even if a filed trip could be arranged, it might be cancelled or curtailed due to the inaccessibility of transportation and gasoline. The absence of money, therefore, meant fewer funds for field trips, for extra projects, and for classroom materials for teachers.

Resource people were asked to come and talk with the students. This also provided frustration to some teachers, since obtaining a variety of knowledgeable resource people was difficult.

Educating those teachers who were not in the Career Education program was found to be laborious. The reaction of some of these teachers was resentment, and often times ridicule for the Career Education teachers and the program.

The development of favorable attitudes in those teachers and the administration was an important goal in the achievement of Career Education. Development of community involvement, concurrent with parental interest, was also considered vital in the establishment of a successful Career Education program.

Other miscellaneous responses which were not included into the above ten areas, but also of value, were the absence of knowledge of the students in regard to Career Education and their misconception that this was a new course added to their curriculum. A disadvantage to the program evolvement was the reality that these people lived in a strictly rural area and were located away from industry and jobs which could have provided an invaluable learning experience.

Several basic problem areas were previously identified. When asked how they overcame these problems the teachers responded in the following manner. In dealing with the lack of materials and supplies, teachers utilized a variety of techniques and methods as resources for substitution. Teachers made or collected their own material with student, parental, and community help. In addition to working with librarians and principals to choose Career Education materials, teachers used the libraries for reference material, borrowed filmstrips, and set up their own centers for references. They also wrote companies for information and ordered materials for the coming year.

By combining or blending other subjects with Career Education units, teachers were able to conserve time. Developing charts, typing units, and writing proper lesson units on their own time were noted as teacher time savers. To further conserve time, teachers shared planning responsibilities, placed less emphasis on academic subjects, had students participating in group discussions, and carefully scheduled each subject. Concepts from the current school curriculum were added to Career Education units. Principals and teachers held special meetings on how to correlate Career Education into reading, math, and additional activities. In addition to this, teachers attended conferences to observe how others implemented ideas. Most helpful in providing ideas on program implementation, was the Career Education Staff

To provide interest in Career Education and provide beneficial information, in-service training programs were given in the school districts and faculty meetings were held to discuss problems. Teacher interest of those not participating in the Career Education workshops was increased by the enthusiasm of the teachers who attended the Career Education workshops and other classes visiting Career Education classes. Teacher understanding was enhanced when Career Education was related to some of the teacher's previous teaching methods, and it was discovered that this was not something of which to be afraid.

To overcome the problems encountered with resource people, the teachers would take their classes to the resource person, double classes when the resource person did arrive, revise their schedules to suit the availability of resource people, and contact the resource people personally, thus making this person feel needed. In order to secure the services of more resource people, the teachers would make units more relevant to their particular community. Other teachers, both classroom and special, served as resource people.

Transportation presented another problem that had to be dealt with. Teachers often used their own automobiles to transport students. Careful planning resulted in having short field trips, and field trips in which the students could walk to and from. Films exhibiting people at work were used as a substitution for these trips. Resource people were relied on more heavily as another means of substitution. Students undertook projects to raise money for gasoline, such as having a newspaper unit to sell a school newspaper. Teachers even spent their own money to overcome the problem of lack of funds.

Teachers were further asked for their suggestions as to how specific problems could be overcome, whether they overcome that problem or not.

Most responses indicated that more organization was needed for class and planning time. Some beneficial suggestions were the combining of different classes, spending more time and effort in teaching units, providing a teacher planning period during school day, and allowing students to help in planning. Other recommendations were to have paid days prior to the opening of school and have administrators applying pressure and support for additional time for planning. One teacher thought it would be an excellent idea to have a closed lunch room so that the teachers could have a planning period the very last period of the day.

To conserve materials, teachers could share materials, order materials in advance, and develop their own materials. Furthermore, the various state universities could buy films and place them in audio-visual circulation and resource rooms could be available in the schools for their viewing. If money could be made available, classroom teachers could buy materials, the regional planning staff could provide more supplies, and a board of education could allocate funds for materials.

To maintain teacher interest in Career Education, in-service training and Career Education workshops for teachers and administrators were endorsed by the teachers. Having principals involved and emphasizing the leadership of a few teachers were suggestions given to stimulate the interest of teachers. Teacher motivation and interest could be encouraged by the purchasing of expertly prepared units which could be used as teacher units and would further aid the teacher in developing his own written units. Continuing emphasis on the merits of Career Education and its adaptability to the needs of the community would not only reinforce teacher enthusiasm, but would also be a progressive step in program implementation.

Teacher understanding of Career Education could be heightened by in-service workshops and record-keeping. Active participation of all the teachers in the school system in teaching Career Education would bring about total involvement. Inviting parents to visit Career Education classes and developing a public relations program within the communities would help to increase community involvement. As a result of a public relations program, it was felt that more resource people would want to visit Career Education classes and that the school would be able to contact more resource people in the community.

It appeared that additional funding could provide solutions for many of the problems that teachers encountered while working with the Career Education program. More money would mean that school districts could purchase necessary equipment and supplies and that a lending library could be developed for the use of Career Education films by the different schools. Transportation and the purchase of fuel could be obtained for field trips of funds. It may be that the establishment of a special fund appropriate for Career Education transportation might be the answer. If this measure did succeed, accessibility to a school bus for transportation or the use of parents' cars could be considered. Field trips might be planned that were within walking distance of the school. Questions could be formulated in regard to these field trips, and a discussion with the students on the various aspects of these vocations could enrich the learning experience.

It is important to point-out that in order to fulfill the needs as discussed above and provide relevant beneficial solutions to the problems, teachers felt the administration played a vital role. Without the administration's continued support of Career Education and their involvement, the teachers felt these problems would remain.

Teachers were also asked to list rewarding experiences which they had encountered through the Career Education program. These responses were: (from most to least mentioned)

1. High interest and enthusiasm of the students toward Career Education
2. Development of different career interests in the students
3. Participation and involvement of all students
4. Resource people visiting the schools
5. The enthusiasm of the students on field trips
6. Student self-satisfaction and enjoyment
7. Students role-playing of occupational units
8. Student academic performance increased
9. Attitude change with students
10. Teacher enjoyment of Career Education
11. Development of vocational awareness of students and teachers
12. Career day in the schools.

Continued study of each of the twelve categories provided some important teacher opinion which was considered advantageous to consider.

In compiling the results of the questionnaire, it was found that the high interest and enthusiasm of the students was the single most frequently given response of the teachers. The students, in fact, demonstrated a high degree of interest in different school subjects that were related to specific careers. Furthermore, increased inquiry and eagerness on the part of the students developed toward prospective positions in the world of work. Students realized that work was a rewarding experience, both in monetary gains and the sense of accomplishment of a task.

The active participation and involvement of all the students in the Career Education classroom was viewed favorably by the teachers. Students took an active and productive role in class activities and used the materials that were available to them. Career Education gave the students the opportunity to develop in the skill areas. Role-playing also provided an opportunity for all the students to become involved. Even the shy and withdrawn students participated in role playing the careers they desired when they enter the world of work. The involvement and relevancy of role playing elicited much "joy and excitment" from the students.

Through Career Education, students were able to discover their abilities in different areas; they also developed self-confidence and a sense of accomplishment. The students displayed eagerness in their work commenting that learning was fun. Motivation to learn and classroom performance increased. One teacher stated, "They learn more readily than from strict textbooks." Another teacher remarked, "This is the first year in all my teaching experiences I have had such wonderful achievement test results, the total class advanced two grades. To me, this is proof that Career Education really works."

Communication between students and teachers progressively opened. Attitudes changed in students when they realized the need for school work in solving problems one would encounter in the world of work. The teachers of Career Education were enthusiastic and provided students with happy and rewarding experiences. Special teachers enjoyed rendering their services as resource people. The willingness of resource people to cooperate brought favorable responses from the students, such as interviewing the resource people [illegible] being directly involved through the exchanging of ideas.

Field trips presented another rewarding experience encountered by the teachers. Students displayed high interest and asked questions about the different careers they viewed. Furthermore, the police departments, fire departments, food service chains, commercial equipment cookeries, and the vocational schools gave thoughtful and favorable impressions.

Career Education Information Inventory

Hypotheses were tested using the Career Education Information Inventory (CEII). Sixteen items were selected which were considered to emphasize attitudes toward Career Education (items 2, 3, 9, 17, 22, 23, 24, 25, 29, 30, 32, 37, 38, 63, 71, 72). Sixty-two items, some of them overlapping with attitudes, were considered to measure knowledge of Career Education (1, 4-8, 10-16, 18-22, 25-36, 39-62, 64-71). All hypotheses were tested using the post-posttest results of the CEII with the exception of hypotheses 4 and 10 which were tested comparing pretest to post-posttest CEII performance (after one year in program).

The first and seventh hypotheses were tested using multiple discrimination analysis. Chi-Square tests upon the classification were significant beyond the .01 level for X^2 with nine degrees of freedom. Table 45shows the classification of teachers into age groups.

Table 45. Classification of Educational Personnel into Age Groups Based Upon Their Knowledge and Attitudes Toward Career Education

Classified Age Group	Attitude Ho1				Knowledge Ho7			
	Actual Age Group							
	Under 30	31-40	41-50	50+	Under 30	31-40	41-50	50+
Under 30	23	2	1	0	28	2	0	0
31-40	8	28	0	0	0	26	1	0
41-50	1	1	22	0	2	0	23	0
50+	0	0	0	19	1	0	0	18

Results of the tests of hypotheses 1 and 7 suggestedthat age was not independent of attitude or knowledge of Career Education. However, no discernible pattern of differences could be found among the items. Patterns of agreement and disagreement were similiar across the groups for item responses. However, certain item scores were significantly lower for one of the groups. An example of this was the score for the item of attitudes: All education should be Career Education. Most groups were undecided, but those over 50 years old tended to agree with the statement slightly more.

Hypotheses 2 and 8 could not be tested because there were not enough vocational education teachers in the sample to compare to non-vocational education teachers for the 17 attitude, and 62 knowledge variables. However, Table 46 displays the means and standard deviations obtained for each item in the CEII for the knowledge criterion, and Table 47 displays means and standard deviations for the attitude criterion. The scores were very similar across vocational and non-vocational teachers. However, for the knowledge survey item #31: Students presently have sufficient orientation to the possibilities in the world of work to make sound career decisions, vocational education teachers strongly agreed while non-vocational education teachers strongly disagreed with the item.

Hypotheses 3 and 7 involved comparing elementary, junior high, and secondary teachers' attitude and knowledge concerning Career Education. The discriminant analysis approach was utilized to test these hypotheses. Table 48 shows the classification based upon the discriminant functions were highly effective. Chi-Squares on the contingency table data in Table 48 were highly significant (<.01) and suggested that there were differences between elementary, junior high, and secondary teachers in attitudes toward and knowledge of Career Education. In the attitude and knowledge surveys, no large difference could be discerned between the teachers in any particular item. Patterns of response were similar for the three groups across the items. However, generally, elementary teachers scored slightly more undecided about many items than other teachers.

Table 46. Means and Standard Deviations of Non-Vocational and Vocational Education Teachers' Knowledge of Career Education

CEII Item	Non-Vocational Teachers' Knowledge (n=108)		Vocational Teachers' Knowledge (n=5)	
	Mean	SD	Mean	SD
1	1.204	0.543	1.200	0.447
4	1.252	0.478	1.000	0.000
5	4.542	0.804	4.600	0.548
6	2.231	0.913	2.000	1.000
7	1.477	0.635	1.200	0.447
8	1.630	0.664	1.400	0.548
10	1.407	0.581	1.800	0.447
11	2.717	1.248	2.000	1.225
12	1.500	0.604	1.200	0.447
13	1.565	0.752	1.200	0.447
14	1.972	0.803	1.600	0.548
15	2.694	1.063	2.400	1.140
16	2.037	0.796	2.400	1.517
18	3.296	1.442	3.200	1.643
19	1.850	0.775	1.800	0.447
20	4.157	1.120	4.000	1.000
21	1.602	0.528	1.600	0.894
22	1.639	0.618	1.400	0.894
25	1.278	0.508	1.200	0.447
26	1.925	0.908	1.400	0.548
27	1.822	0.684	1.400	0.548
28	2.208	0.964	2.600	1.517

Table 46. Continued

CEII Item	Non-Vocational Teachers' Knowledge (n=108)		Vocational Teachers' Knowledge (n=5)	
	Mean	SD	Mean	SD
29	1.280	0.546	1.000	0.000
30	2.654	1.100	2.200	1.304
31	4.187	1.011	4.400	0.548
32	2.194	0.880	3.400	1.517
33	4.500	0.717	4.750	0.500
34	1.444	0.569	2.200	1.643
35	1.509	0.648	1.000	0.000
36	1.411	0.549	1.400	0.548
39	1.505	0.589	1.500	0.577
40	1.505	0.573	1.200	0.447
41	1.444	0.517	1.200	0.447
42	3.935	0.904	3.200	1.304
43	1.537	0.571	1.400	0.548
44	2.194	1.045	2.800	1.304
45	1.750	0.833	2.000	0.707
46	1.963	0.655	1.400	0.548
47	1.602	0.546	1.600	0.894
48	4.046	1.017	4.600	0.548
49	2.170	0.867	1.800	0.837
50	1.491	0.634	1.200	0.447
51	1.583	0.532	1.200	0.448
52	1.505	0.620	1.200	0.447
53	4.296	1.016	4.800	0.447

Table 46. Continued

CEII Item	Non-Vocational Teachers' Knowledge (n=108)		Vocational Teachers' Knowledge (n=5)	
	Mean	SD	Mean	SD
54	1.916	0.754	1.600	0.894
55	1.444	0.674	1.400	0.548
56	1.917	0.987	1.400	0.548
57	1.370	0.504	1.200	0.447
58	1.546	0.647	1.200	0.447
59	1.620	0.637	1.800	0.836
60	1.722	0.708	1.400	0.548
61	1.906	0.911	1.000	0.000
62	1.906	0.911	1.200	0.447
64	1.841	0.716	1.400	0.548
65	1.804	0.745	1.200	0.548
66	1.757	0.763	1.400	0.548
67	2.029	0.818	1.800	0.837
68	2.113	0.760	1.800	0.837
69	1.514	0.589	1.200	0.447
70	1.682	0.592	1.600	0.894
71	1.729	0.734	1.200	0.447

Table 47. Means and Standard Deviations of Non-Vocational and Vocational Education Teachers' Attitude Towards Career Education

CEII Item	Vocational		Non-Vocational	
	$\overline{X}$	SD	$\overline{X}$	SD
2	2.63	1.30	2.91	1.33
3	1.63	.74	1.83	.81
9	1.38	.52	1.57	.63
22	1.50	.76	1.64	.62
23	1.50	.76	1.55	.54
24	1.50	.53	1.68	.77
25	1.25	.46	1.28	.51
29	1.00	0.00	1.29	.55
30	2.00	1.07	2.68	1.10
32	2.75	1.49	2.21	.88
37	3.78	.74	3.52	1.02
38	3.50	1.07	3.94	1.03
63	1.88	.99	1.56	.60
71	1.38	.52	1.73	.74
72	1.75	.71	2.55	1.11

Table 48. Classification Performance Using CEII Scores to Assign Teachers to Elementary, Junior High, or Secondary School Status Based upon the Discriminate Analysis

Assigned Classification	ATTITUDES Actual Group Membership Elementary	 Jr. High	 Secondary	KNOWLEDGE Elementary	 Jr. High	 Secondary
Elementary	47	0	1	46	0	
Jr. High	1	17	0	1	14	0
Secondary	5	0	23	2	2	23

Hypotheses 4 and 10 were tested using the Hotelling's T^2 procedure to compare teachers' scores before workshops to their scores after the workshops. Table 49 shows the results of the T^2 analyses. While there were significant differences in knowledge, no comparable differences were found in attitudes toward Career Education. These findings suggested that the Career Education workshops were successful in influencing teachers' knowledge about Career Education, but not their attitudes toward it.

Table 49 Results of Comparisons of Pretest CEII Performance with Post-Posttest Performance to Test Hypotheses 4 and 10

KNOWLEDGE			ATTITUDE		
Statistic	df	p<	Statistic	df	p<
T^2 = 1.64.83	371		T^2 = 27.26	368	
F = 2.22	62/31	.01	F = 1.53	17/352	.08

Hypotheses 5 and 11 were tested using multiple discriminant analysis to test the separation between elementary, junior high and secondary teachers, and school administrators. The discriminant functions were highly successful in separating the educator groups based on their responses to CEII items for both attitudes and knowledge. Table 50 shows the classification tables for the discriminant analyses.

Table 50. Classification Performance Using CEII Scores to Assign Educators to Elementary, Junior High, Secondary or Administrator Status Based Upon Discriminant Analysis

	ATTITUDES				KNOWLEDGE			
	Actual Group Membership							
Assigned Classification	Elementary	Jr. High	Secondary	Administrators	Elementary	Jr. High	Secondary	Administrators
Elementary	47	0	1	0	44	1	0	0
Jr. High	1	17	0	0	1	14	0	0
Secondary	5	0	23	0	3	1	21	0
Administration	0	0	0	11	1	0	2	13

There were no unusual differences in patterns of responding to the items for the four groups except as reported earlier for elementary verses the other groups of teachers.

Hypotheses 6 and 12 involved comparing knowledge and attitudes of urban and rural teachers toward Career Education. Table 51 shows the results of the tests of those hypotheses using Hotelling's T^2 procedure. There were no significant differences between the urban and rural teachers in either attitude or knowledge. This might be a result of the lack of real urban centers in the region where the study was conducted. The results may be more accurately characterized as showing no differences between rural and small town teachers.

Table 51. Results of Comparisons of Rural to Urban Teachers' Knowledge and Attitude to Test Hypotheses 6 and 12

ATTITUDE			KNOWLEDGE		
Statistic	df	$p <$	Statistic	df	$p <$
$T^2 = 12.58$	111		$T^2 = 159.69$	111	
$F = 0.633$	12/95	.86	$F = 1.16$	62/50	.029

Chapter 5

FINDINGS
STUDENT COMPONENT

Presented in this chapter were the findings relative to the student component of the study. Data were collected from a sample of approximately 1,300 students in a pretest-posttest design. Several instruments were used to collect data on the following variables:

1. Academic Achievement
2. Attitudes
3. Career Maturity
4. Motivation
5. Occupational Aspirations
6. Absenteeism

These were the areas covered by the objectives outlined previously for the student component.

Because of the short time period covered by the research project, it was not anticipated that many significant changes would be evidenced by students in the area of academic achievement. These basic skills take years to develop and/or modify. What was accomplished by collecting data relative to academic achievement was the building of a set of base-line data on students. This set of data might be usable in future years for making longitudinal comparisons over several years. However, since the project was planned for only one year, it would be difficult to exercise adequate controls over the variables. Testing of basic skills of the 1973-1974 school year's fourth and eighth graders may be conducted in future years in the school setting. This year's eleventh graders will soon be leaving the high school setting, but it may be possible to conduct some type of follow-up study in later years to determine if academic achievement levels have been altered and, if possible, determine the factors which contributed to the changes.

In the other areas tested within the student component, the time factor was not considered as crucial as it was with academic achievement. Attitudes, career maturity, motivation, occupational aspirations, and absenteeism may be changed in a much shorter period of time, although one school year may still be too short a period of time for several significant changes to occur. As with the academic achievement data, some base-line data were established.

Complicating the findings also was the fact that the 1973-1974 school year was the "implementation year" for the Career Education project. Future years will probably be more productive ones as teachers become more familiar with the Career Education concept, learn to more effectively utilize Career Education materials, and begin to do more and more cooperative planning so that Career Education is infused throughout the curriculum.

Given the limitations discussed above, the data analyses were conducted in order to identify significant changes which were evidenced. The analyses were used (1) for drawing conclusions relative to the hypotheses stated earlier, (2) to identify implications from the findings for improving education in the public schools, and (3) as a basis upon which to make recommendations concerning Career Education in the Hazard Region and elsewhere.

Findings concerning each of the six areas listed previously were presented separately in this chapter. Within each presentation section, the findings were arranged by data source (instrument used and grade level).

Academic Achievement

The CTBS was utilized to measure academic achievement levels of sample groups from the Hazard Region. Fourth, eighth, and eleventh grade students were included. CTBS scores were reported as grade equivalent scores.

The CTBS battery included two subtests on reading achievement (Vocabulary and Comprehension), two on language achievement (Mechanics and Spelling), three on arithmetic achievement (Computation, Concepts, and Applications), and two on study skills achievement (Using Reference Materials and Using Graphic Materials). An eleventh score (Total) was a composite score based on the subtest scores.

The analysis of covariance technique was used to test the effect of the Career Education program on student academic achievement. The pretest score on each variable was used as the covariate. The technique was first used to check for interaction effects of the two main effects "Sex" and "Group." When non-significant interaction effects were detected, main effects were then analyzed.

CTBS--Fourth Grade

The analysis of covariance results for the fourth graders were presented in Table 52. The table included the variable names, the observed pretest and posttest means, the posttest means adjusted for the covariate, and the computed F-values.

An inspection of Table 53 revealed that, when "Sex" was used as a main effect, four significant F-values resulted. On the variable, "Reading Comprehension," an F-value of 4.326 (significant at the .05 level) was computed. A comparison of adjusted posttest means revealed that the mean for males (4.78) was higher than that of females (4.44). The opposite was true for the variable, "Spelling." The adjusted mean for females (4.50) was significantly higher than that of males (4.19), resulting in an F-value of 4.100 which was signigicant at the .05 level. The pattern was reversed again on two of the three mathematics subtests. On the variable, "Math Concepts," males had an adjusted mean (4.88) which was significantly higher than that of the female group (4.40). The F-value of 9.702 was significant at the .01 level. Males also achieved

Table 52. Analysis of Covariance for CTBS Scores of Fourth Grade Students (Sex X Group)

	CAREER ED						NON-CAREER ED						
	Males			Females			Males			Females			
Variable:	Pre-test	Post-test	Ad-justed	Pre-test	Post-test	Ad-justed	Pre-test	Post-test	Ad-justed	Pre-test	Post-test	Ad-justed	
	$\bar{X}$	$\bar{X}$	$\bar{X}$	$\bar{X}$	$\bar{X}$	$\bar{X}$	$\bar{X}$	$\bar{X}$	$\bar{X}$	$\bar{X}$	$\bar{X}$	$\bar{X}$	F-Value
Reading													
Vocabulary	4.06	4.65	4.43	3.80	4.36	4.41	3.71	4.13	4.27	3.85	4.33	4.33	0.100
Comprehension	4.17	4.91	4.75	4.12	4.56	4.46	3.62	4.36	4.81	4.17	4.58	4.42	0.091
Language													
Mechanics	3.79	5.01	5.12	4.17	5.46	5.27	3.51	4.95	5.28	4.13	5.21	5.05	0.420
Expression	4.15	4.83	4.72	4.21	4.82	4.64	3.64	4.37	4.68	3.95	4.91	4.96	0.684
Spelling	3.86	4.36	4.24	3.87	4.49	4.36	3.38	3.91	4.15	3.61	4.67	4.73	1.775
Mathematics													
Computations	4.33	5.11	4.75	4.08	4.92	4.80	3.64	4.30	4.59	3.69	4.45	4.70	0.070
Concepts	4.02	5.22	5.02	3.94	4.49	4.36	3.61	4.57	4.75	3.56	4.23	4.44	1.315
Applications	4.08	5.01	4.86	4.08	4.15	4.00	3.68	4.46	4.63	3.64	3.99	4.19	1.479
Total	4.01	4.82	4.62	3.95	4.57	4.43	3.55	4.24	4.56	3.76	4.45	4.52	0.810
Study Skills													
References	3.81	4.94	5.07	4.02	4.85	4.83	3.78	4.23	4.39	4.31	5.24	5.00	2.555
Graphics	4.42	5.40	5.15	4.12	4.74	4.74	4.08	4.59	4.63	3.91	4.68	4.87	3.013

Table 53. Analysis of Covariance for CTBS Scores of Fourth Grade Students (By Sex and By Group)

	SEX							GROUP						
	Males			Females				Career Ed			Non-Career Ed			
Variable:	Pre-test $\overline{X}$	Post-test $\overline{X}$	Ad-justed $\overline{X}$	Pre test $\overline{X}$	Post-test $\overline{X}$	Ad-justed $\overline{X}$	F-Value	Pre-test X	Post-test $\overline{X}$	Ad-justed $\overline{X}$	Pre-test $\overline{X}$	Post-test $\overline{X}$	Ad-justed $\overline{X}$	F-Value
Reading														
Vocabulary	3.88	4.38	4.35	3.82	4.35	4.38	0.024	3.90	4.47	4.42	3.78	4.23	4.30	1.033
Comprehension	3.89	4.62	4.78	4.14	4.57	4.44	4.326*	4.14	4.70	4.57	3.89	4.46	4.62	0.003
Language														
Mechanics	3.64	4.98	5.20	4.15	5.36	5.18	0.024	4.02	5.28	5.21	3.80	5.08	5.17	0.009
Expression	3.89	4.59	4.70	4.11	4.85	4.77	0.231	4.19	4.82	4.67	3.79	4.63	4.82	0.422
Spelling	3.61	4.13	4.19	3.77	4.56	4.50	4.100*	3.86	4.44	4.31	3.49	4.27	4.43	0.678
Mathematics														
Computations	3.98	4.69	4.67	3.93	4.74	4.76	0.491	4.17	5.00	4.78	3.67	4.37	4.64	1.310
Concepts	3.81	4.89	4.88	3.79	4.39	4.40	0.702**	3.97	4.78	4.62	3.58	4.41	4.60	0.392
Applications	3.87	4.73	4.74	3.91	4.09	4.08	13.639***	4.08	4.49	4.34	3.66	4.24	4.42	0.012
Total	3.77	4.52	4.59	3.88	4.52	4.47	1.910	3.97	4.67	4.51	3.65	4.34	4.54	0.031
Study Skills														
References	3.80	4.58	4.72	4.14	5.01	4.90	0.469	3.94	4.89	4.92	4.04	4.73	4.69	0.916
Graphics	4.24	4.98	4.88	4.04	4.71	4.80	0.196	4.24	5.00	4.91	4.00	4.63	4.75	1.104

*Indicates significance at the .05 level.
**Indicates significance at the .01 level.
***Indicates significance at the .001 level.

better than females on the subtest "Math Applications." The adjusted mean for males was 4.74 and that of females was 4.08. The resulting F-value of 13.639 was significant at the .001 level. Low F-values were computed on all other CBTS scores in this part of the analysis.

When "Group" was introduced as a main effect, no significant F-values were observed. In fact, most of the F-values were under 1.000. Adjusted posttest means for both groups were similar; in some cases, they differed by only .04 or .05.

CTBS--Eighth Grade

The CTBS battery was also administered to the groups of eighth grade students. The results of the analysis of covariance to check for interaction were reported in Table 54.

The F-values computed relative to the interaction effects of "Sex" and "Group" were all non-significant. Each of the classification variables was then introduced as a main effect. The analysis of covariance was used to test these main effects separately. The resulting means and F-values were reported in Table 55.

The use of "Sex" as a main effect produced one significant F-value. This was on the subtest concerned with "Math Computations." Male eighth graders had an adjusted posttest mean of 8.36 and the corresponding mean for females was 7.82. The difference was large enough to result in an F-value of 4.379, significant at the .01 level. Eighth grade males achieved better than their female counterparts. No other differences were significant, most being very slight.

The same variable, when tested using "Group" as a main effect, evidenced an F-value of 11.281, significant at the .001 level. A comparison of group means revealed that the higher adjusted posttest mean was earned by the Career Education group. Their mean of 8.40 was significantly higher than that

Table 54. Analysis of Covariance for CBTS Scores of Eighth Grade Students (Sex X Group)

Variable:	CAREER ED						NON-CAREER ED						F-Value
	Males			Females			Males			Females			
	Pre-test $\overline{X}$	Post-test $\overline{X}$	Adjusted $\overline{X}$	Pre-test $\overline{X}$	Post-test $\overline{X}$	Adjusted $\overline{X}$	Pre-test $\overline{X}$	Post-test $\overline{X}$	Adjusted $\overline{X}$	Pre-test $\overline{X}$	Post test $\overline{X}$	Adjusted $\overline{X}$	
Reading													
Vocabulary	6.95	7.70	7.95	7.19	7.80	7.80	7.56	8.21	7.82	7.20	7.79	7.77	0.075
Comprehension	7.14	8.39	8.55	7.48	8.45	8.33	7.46	8.08	7.96	7.31	7.98	8.00	0.244
Language													
Mechanics	7.00	7.71	8.34	7.95	9.10	8.76	6.92	7.72	8.21	8.05	8.79	8.36	0.190
Expression	7.31	8.16	8.24	7.80	8.86	8.51	6.85	8.11	8.60	7.50	8.39	8.30	1.039
Spelling	6.63	7.70	8.40	7.74	8.58	8.36	7.14	7.78	8.06	8.29	8.80	8.12	0.037
Mathematics													
Computations	6.44	7.96	8.71	7.28	8.10	8.04	7.24	7.81	7.79	7.95	8.32	7.63	1.591
Concepts	7.44	8.61	8.65	7.28	8.24	8.31	7.35	8.24	8.30	8.51	8.28	8.13	0.057
Applications	7.02	8.44	8.49	6.94	7.72	7.78	7.20	7.87	7.89	7.89	7.56	7.45	0.124
Total	6.75	7.91	8.08	7.23	8.11	8.15	7.03	7.53	7.60	8.31	8.07	7.82	0.047
Study Skills													
References	7.06	8.25	8.39	8.17	8.83	8.78	7.12	8.06	8.20	8.81	8.63	8.46	0.018
Graphics	7.62	8.80	8.85	9.48	8.68	8.44	7.47	8.33	8.40	7.28	8.04	8.14	0.026

Table 55. Analysis of Covariance for CBTS Scores of Eighth Grade Students (By Sex and By Group)

	SEX							GROUP						
	Males			Females				Career Ed			Non-Career Ed			
Variable:	Pre-test X	Post-test X	Ad-justed X	Pre-test X	Post-test X	Ad-justed X	F-Value	Pre-test X	Post-test X	Ad-justed X	Pre-test X	Post-test X	Ad-justed X	F-Value
Reading														
Vocabulary	7.18	7.89	7.90	7.20	7.79	7.79	0.327	7.06	7.74	7.88	7.34	7.95	7.79	0.199
Comprehension	7.27	8.27	8.33	7.39	8.20	8.15	0.131	7.30	8.42	8.45	7.37	8.02	7.99	2.975
Language														
Mechanics	6.97	7.84	8.29	8.00	8.93	8.54	0.806	7.44	8.47	8.53	7.62	8.38	8.30	0.696
Expression	7.14	8.14	8.38	7.64	8.61	8.40	0.004	7.54	8.49	8.37	7.25	8.28	8.42	0.080
Spelling	6.82	7.73	8.27	8.04	8.70	8.29	0.001	7.15	8.11	8.38	7.85	8.41	8.09	1.272
Mathematics														
Computations	[illegible]	7.90	8.36	7.64	8.21	7.82	4.379*	6.83	8.02	8.40	7.68	8.12	7.69	11.281**
Concepts	7.40	8.47	8.52	7.94	8.26	8.22	0.506	7.36	8.44	8.49	8.07	8.26	8.20	0.527
Applications	7.09	8.22	8.26	7.45	7.63	7.60	2.117	6.98	8.10	8.16	7.63	7.68	7.62	1.395
Total	6.89	7.76	7.90	7.81	8.09	7.97	0.178	6.98	8.00	8.11	7.85	7.86	7.74	1.371
Study Skills														
References	7.08	8.17	8.32	8.54	8.72	8.60	0.518	7.57	8.52	8.57	8.20	8.43	8.37	0.326
Graphics	7.56	8.62	8.67	8.22	8.31	8.27	0.531	8.47	8.74	8.66	7.35	8.14	8.23	0.639

*Indicates significance at the .05 level.
**Indicates significance at the .001 level.

of the Non-Career Education students (7.69). Career Education students learned at a relatively faster rate in making mathematical computations. On none of the remaining CTBS were there any significant differences between the groups.

CTBS-Eleventh Grade

The results of the data analysis relative to academic achievement of eleventh graders were presented in this section. Table 56 contained the analysis of covariance figures for the test for interaction of the variables "Sex" and "Group."

One significant F-value was observed for the "Sex" by "Group" interaction. This indicated that the two variables were not working independently and that they should not be analyzed separately. The significant interaction variable was "Spelling."

Each classification variable (Sex, Group), except in the case of "Spelling," was then analyzed for main effects. These data were presented in Table 57.

No significant F-value resulted when either "Sex" or "Group" was used the main effect. However, a comparison of the adjusted posttest means revealed three values approached significance. Males achieved somewhat higher scores on Mathematics "Concepts" than did the females; the Career Education group was slightly lower on Mathematics "Applications"; and the Career Education group was slightly higher on Study Skills "Graphics."

In summary, no significant differences were found on the CTBS scores for eleventh grade students. However, three differences did approach significance. These were discussed above.

Table 56. Analysis of Covariance for CTBS Scores of Eleventh Grade Students (Sex X Group)

Variable:	CAREER ED						NON-CAREER ED						F-Value
	Males			Females			Males			Females			
	Pre-test $\overline{X}$	Post-test $\overline{X}$	Adjusted $\overline{X}$	Pre-test $\overline{X}$	Post test $\overline{X}$	Adjusted $\overline{X}$	Pre-test $\overline{X}$	Post-test $\overline{X}$	Adjusted $\overline{X}$	Pre-test $\overline{X}$	Post-test $\overline{X}$	Adjusted $\overline{X}$	
Reading													
Vocabulary	8.82	9.20	9.30	8.99	9.50	9.45	8.84	9.54	9.63	9.04	9.33	9.23	2.206
Comprehension	9.39	9.82	10.17	9.92	10.49	10.35	9.51	9.70	9.94	10.31	10.51	10.01	0.051
Language													
Mechanics	8.89	9.65	10.18	10.01	10.62	10.41	9.23	9.93	10.24	10.78	10.70	9.99	0.399
Expression	8.60	9.08	9.48	9.41	9.68	9.37	8.50	9.30	9.79	9.39	10.00	9.71	0.002
Spelling	9.33	9.16	9.73	10.30	10.68	10.52	10.11	11.22	11.21	10.92	11.36	10.74	5.704
Mathematics													
Computations	8.51	9.17	9.51	9.16	9.52	9.31	8.63	9.72	9.95	9.21	9.90	9.64	0.046
Concepts	9.58	10.18	10.16	9.23	9.47	9.77	10.31	11.29	10.61	9.78	10.32	10.12	0.041
Applications	9.86	9.69	9.09	8.40	8.66	9.17	9.42	10.38	10.12	9.22	9.94	9.82	0.396
Total	8.59	9.15	9.57	9.20	9.77	9.63	9.05	9.84	9.83	9.71	10.16	9.56	0.891
Study Skills													
References	10.16	10.67	10.51	10.01	10.25	10.20	9.09	9.91	10.45	10.19	10.54	10.36	0.054
Graphics	9.42	10.33	10.61	8.54	9.29	10.25	9.84	10.58	9.03	9.01	10.24	9.32	0.361

Table 57. Analysis of Covariance for CTBS Scores of Eleventh Grade Students (By Sex and By Group)

	SEX							GROUP						
	Males			Females				Career Ed			Non-Career Ed			
Variable:	Pre-test $\overline{X}$	Post-test $\overline{X}$	Ad-justed $\overline{X}$	Pre-test $\overline{X}$	Post-test $\overline{X}$	Ad-justed $\overline{X}$	F-Value	Pre-test $\overline{X}$	Post-test $\overline{X}$	Ad-justed $\overline{X}$	Pre-test $\overline{X}$	Post test $\overline{X}$	Ad-justed $\overline{X}$	F-Value
Reading														
Vocabulary	8.83	9.31	9.41	9.00	9.46	9.39	0.480	8.92	9.38	9.39	8.94	9.43	9.42	0.085
Comprehension	9.43	9.78	10.10	10.02	10.49	10.26	0.284	9.71	10.23	10.28	9.92	10.12	9.98	1.522
Language														
Mechanics	9.00	9.74	10.20	10.20	10.64	10.31	0.000	9.57	10.24	10.32	10.03	10.33	10.11	0.234
Expression	8.56	9.15	9.58	9.41	9.76	9.46	0.101	9.09	9,45	9.41	8.96	9.67	9.75	1.357
Spelling	9.59	9.83	10.21	10.46	10.85	10.58	0.355	9.92	10.49	10.62	10.53	11.29	10.96	3.780
Mathematics														
Computations	8.55	9.35	9.66	9.17	9.61	9.39	1.146	8.90	9.38	9.39	8.93	9.81	9.79	2.626
Concepts	9.81	10.54	10.31	9.37	9.69	9.85	3.816	9.37	9.75	9.92	10.03	10.79	10.36	3.044
Applications	9.72	[illegible]	9.42	8.61	8.98	9.34	0.120	9.21	9.46	9.63	9.32	10.15	9.96	3.764
Total	8.72	9.35	9.64	9.31	9.85	9.62	0.322	8.94	9.50	9.60	9.37	9.99	9.70	0.313
Study Skills														
References	9.68	10.33	10.49	10.07	10.35	10.25	0.182	10.06	10.39	10.30	9.70	10.25	10.40	0.012
Graphics	8.52	10.44	9.90	8.06	9.61	9.94	0.004	8.43	9.64	9.87	9.38	10.39	9.19	3.660

Attitudes

The KSAI was utilized to test student attitudes toward self, classmates, reading, school, math, and citizenship. Student groups from the fourth grade completed the first five sections of the KSAI. The eighth and eleventh graders completed all six subtests.

As with the academic achievement tests, the KSAI was administered in a pretest-posttest design. The analysis of covariance was used to adjust posttest scores and test for group differences. Again, the first test was to detect possible interaction of the variables "Sex" and "Group." Subsequent analyses were performed to test the main effects.

KSAI--Fourth Grade

Fourth grade students completed the first five sections of the KSAI. A data analysis was first undertaken to ascertain if there were interaction effects produced by the variables "Sex" and "Group." The means and F-values of the KSAI scores were presented in Table 58.

The F-values reported in Table 58 were non-significant. The two classification variables did not interact to produce significant differences among the groups. The analysis of covariance was then utilized to test the effects of "Sex" and "Group" separately. The means and F-values of attitude scores for fourth grade students were contained in Table 59.

When "Sex" was used as a main effect in analyzing attitude scores of fourth graders, no significant F-values were computed. On all five attitude scores, males made positive gains and with the exception of "Math," their posttest attitude scores were higher than those of females. Females actually exhibited decreases in attitude scores from pretest to posttest. This pattern resulted in adjusted posttest means which were nearly identical to observed posttest means.

Table 58. Analysis of Covariance for Attitude Scores of Fourth Grade Students (Sex X Group)

Variable:	CAREER ED						NON-CAREER ED						F-value
	Males			Females			Males			Females			
	Pre-test $\bar{X}$	Post test $\bar{X}$	Ad justed $\bar{X}$	Pre-test $\bar{X}$	Post-test $\bar{X}$	Ad-justed $\bar{X}$	Pre-test $\bar{X}$	Post-test $\bar{X}$	Ad-justed $\bar{X}$	Pre-test $\bar{X}$	Post-test $\bar{X}$	Ad-justed $\bar{X}$	
Attitude Toward:													
Self	10.15	9.97	9.96	10.06	10.43	10.42	10.29	12.20	12.19	12.76	10.24	10.28	1.466
Classmates	8.21	8.33	8.34	8.20	8.59	8.60	8.57	11.14	11.15	10.32	9.03	9.00	1.169
Reading	10.27	9.91	9.91	9.76	9.78	9.76	10.00	12.51	12.52	11.94	9.68	9.66	1.514
School	8.33	8.18	8.18	7.59	7.92	7.95	8.20	11.06	11.06	9.68	8.29	8.25	1.684
Math	10.33	10.79	10.76	9.84	10.53	10.75	10.26	9.97	9.98	10.88	10.44	10.14	0.066

Table 59. Analysis of Covariance of [illegible] Scores for Fourth Grade Students (By Sex and By Group)

Variables:	SEX							GROUP						
	Males			Females				Career Ed			Non-Career Ed			
	Pre-test $\overline{X}$	Post-test $\overline{X}$	Adjusted $\overline{X}$	Pre-test $\overline{X}$	Post test $\overline{X}$	Adjusted $\overline{X}$	F-Value	Pre-test $\overline{X}$	Post-test $\overline{X}$	Adjusted $\overline{X}$	Pre-test $\overline{X}$	Post-test $\overline{X}$	Adjusted $\overline{X}$	F-Value
Attitude Toward														
Self	10.22	11.12	11.11	11.17	10.35	10.36	0.555	10.10	10.24	10.23	11.51	11.23	11.25	1.139
Classmates	8.40	9.78	9.79	9.07	8.77	8.77	0.720	8.21	8.49	8.50	9.43	10.10	10.09	2.054
Reading	10.13	11.25	11.25	10.65	9.73	9.73	1.824	9.96	9.83	9.83	10.96	11.12	11.11	1.266
School	8.26	9.66	9.67	8.45	8.07	8.07	2.385	7.89	8.02	8.04	8.93	9.70	9.68	2.573
Math	10.29	10.37	10.36	10.27	10.49	10.50	0.054	10.04	10.63	10.76	10.57	10.20	10.06	4.683*

*Indicates significance at the .05 level.

With one notable exception, a similar pattern emerged when "Group" was used as a main effect in the analysis. Adjusted posttest scores were again nearly identical to observed posttest scores. The exception was on the variable, "Attitude Toward Math." A significant F-value was computed on this variable. A comparison of adjusted means revealed that the Career Education group had a significantly higher score than the Non-Career Education group on the variable. The Non-Career Education group actually evidenced a decrease in attitude from pretest to posttest while the Career Education group made a positive gain. The F-value of 4.683 was significant at the .05 level.

KSAI--Eighth Grade

Eighth grade students also completed the KSAI instrument in a pretest-posttest design. The eighth graders had six subscores since they completed an "Attitude Toward Citizenship" subtest in addition to the five sections completed by the fourth graders. The data analysis of possible interaction effects was summarized in Table 60. Pretest and posttest observed means, posttest means adjusted for the covariate, and computed F-values were reported.

There was no interaction of the two classification variables. Most of the F-values were less than 1.000 and only one was larger than 2.000. The main effects were tested separately and the resulting means and F-values were presented in Table 61.

When "Sex" was used as a main effect, one F-value was found to be significant at the .05 level. The variable was "Attitude Toward Reading." The adjusted mean for females (21.23) was significantly higher than that for males (20.37). On no other variables was there a significant F-value when the analysis was controlled for "Sex." Likewise, when the classification variable was "Group," no significant F-values were computed.

Table 60. Analysis of Covariance for Attitude Scores of Eighth Grade Students (Sex X Group)

Variable:	CAREER ED						NON-CAREER ED						F-Value F.Value
	Males			Females			Males			Females			
	Pre-test $\overline{X}$	Post test $\overline{X}$	Ad-justed $\overline{X}$	Pre-test $\overline{X}$	Post test $\overline{X}$	Ad-justed $\overline{X}$	Pre-test $\overline{X}$	Post-test $\overline{X}$	Ad-justed $\overline{X}$	Pre-test $\overline{X}$	Post test $\overline{X}$	Ad-justed $\overline{X}$	
Attitude Toward:													
Self	21.98	22.43	22.49	21.74	22.62	22.80	22.03	22.55	22.57	22.40	22.71	22.51	0.198
Classmates	23.57	23.65	23.73	23.23	23.54	23.79	23.79	22.41	22.38	24.19	23.92	23.68	1.880
Reading	18.74	20.00	21.06	21.56	21.87	21.19	20.79	19.48	19.27	20.94	21.56	21.26	3.540
School	21.96	22.37	22.60	23.33	22.68	22.45	22.45	22.90	22.75	21.62	22.12	22.61	0.047
Math	19.15	19.17	18.90	18.05	18.59	19.04	19.34	19.48	19.08	18.54	18.10	18.22	0.481
Citizenship	22.83	22.74	22.89	24.08	23.21	22.81	23.17	22.83	22.83	22.79	23.43	23.59	0.820

Table 61. Analysis of Covariance for Attitude Scores of Eighth Grade Students (By Sex and By Group)

	SEX							GROUP						
Variable:	Males			Females				Career Ed			Non-Career Ed			
	Pre-test $\overline{X}$	Post-test $\overline{X}$	Adjusted $\overline{X}$	Pre-test $\overline{X}$	Post-test $\overline{X}$	Adjusted $\overline{X}$	F-Value	Pre-test $\overline{X}$	Post-test $\overline{X}$	Adjusted $\overline{X}$	Pre-test $\overline{X}$	Post-test $\overline{X}$	Adjusted $\overline{X}$	F-Value
Attitude Toward:														
Self	22.00	22.48	22.52	22.12	22.67	22.64	0.097	21.87	22.52	22.63	22.27	22.65	22.53	0.060
Classmates	23.65	23.17	23.21	23.78	23.76	23.73	2.243	23.41	23.60	23.76	24.05	23.38	23.22	2.552
Reading	19.53	19.80	20.37	21.21	21.69	21.23	4.584	20.04	20.86	21.12	20.89	20.81	20.55	3.099
School	22.15	22.57	22.66	22.35	22.71	22.64	0.004*	22.59	22.89	22.64	21.91	22.40	22.66	0.007*
Math	19.23	19.29	18.97	18.33	18.31	18.57	0.254	18.65	18.91	18.96	18.83	18.59	18.53	0.192
Citizenship	22.96	22.77	22.86	23.34	23.33	23.25	0.550	23.40	22.95	22.85	22.93	23.21	23.32	0.603

*Indicates significance at the .05 level.

Table 62. Analysis of Covariance for Attitude Scores of Eleventh Grade Students (Sex X Group)

	CAREER ED						NON-CAREER ED						
	Males			Females			Males			Females			
Variable:	Pre-test $\overline{X}$	Post-test $\overline{X}$	Ad-justed $\overline{X}$	Pre-test $\overline{X}$	Post-test $\overline{X}$	Ad-justed $\overline{X}$	Pre-test $\overline{X}$	Post-test $\overline{X}$	Ad-justed $\overline{X}$	Pre-test $\overline{X}$	Post-test $\overline{X}$	Ad-justed $\overline{X}$	F-Value
Attitude Toward:													
Self	21.87	22.09	22.31	22.71	22.96	22.85	22.28	22.24	22.30	22.86	22.49	22.32	0.441
Classmates	22.96	23.18	23.34	23.31	23.53	23.54	23.90	22.83	22.60	23.69	22.94	22.80	0.000
Reading	19.33	19.87	20.78	22.07	21.65	21.06	20.34	19.62	19.98	21.83	21.09	20.64	0.146
School	22.64	23.21	23.38	23.28	23.50	23.41	24.10	23.55	23.14	22.43	21.69	21.94	2.174
Math	19.33	18.82	18.14	18.03	17.80	17.92	18.21	15.90	15.91	16.66	17.43	18.40	5.769*
Citizenship	22.69	22.81	23.21	23.81	24.18	24.06	23.31	23.31	23.43	24.71	24.06	23.51	0.647

*Indicates significance at the .05 level.

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Table 63. Analysis of Covariance for Attitude Scores of Eleventh Grade Students (By Sex and By Group)

Variable:	SEX							GROUP						
	Males			Females				Career Ed			Non-Career Ed			
	Pre-test $\overline{X}$	Post-test $\overline{X}$	Ad-justed $\overline{X}$	Pre-test $\overline{X}$	Post-test $\overline{X}$	Ad-justed $\overline{X}$	F-Value	Pre-test $\overline{X}$	Post-test $\overline{X}$	Ad-justed $\overline{X}$	Pre-test $\overline{X}$	Post-test $\overline{X}$	Ad-justed $\overline{X}$	F-Value
Attitude Toward:														
Self	21.99	22.14	22.31	22.75	22.83	22.71	0.499	22.36	22.60	22.63	22.59	22.38	22.31	0.466
Classmates	23.24	23.07	23.11	23.41	23.37	23.34	0.610	23.17	23.39	23.46	23.78	22.89	22.71	3.419
Reading	19.64	19.79	20.54	22.01	21.50	20.95	0.872	20.94	20.91	20.95	21.16	20.42	20.34	1.577
School	23.08	23.31	23.31	23.05	23.01	23.02	1.963	23.02	23.38	23.40	23.19	22.53	22.48	4.289*
Math	18.99	17.94	17.46	17.66	17.70	18.05	4.013*	18.56	18.22	18.01	17.36	16.73	17.27	2.376
Citizenship	22.88	22.96	23.28	24.05	24.15	23.91	0.939	23.35	23.61	23.71	24.08	23.72	23.47	0.125

*Indicates significance at the .05 level.

KSAI--Eleventh Grade

Eleventh grade students also completed all six sections of the KSAI. The results of the analysis of covariance to detect possible interaction effects were reported in Table 62.

There was one significant interaction of the classification variables, that being for the subtest "Attitude Toward Math." Therefore, main effect variables,"Sex and Group," for that subtest were not considered in the analysis.

When considering "Sex" as the main effect, only a significant F-value for "Math" was observed. However, since the significant interaction was previously identified for this subtest, the significance was not considered appropriate.

The main effects for "Group" displayed one significant difference. For the subtest "Attitude Toward School", the adjusted mean for the Career Education group (23.40) was significantly higher than the corresponding mean for the Non-Career Education group (22.48). Analysis of the non-adjusted means revealed that the Career Education group started with a lower pretest mean than the Non-Career Education group. However, their attitude toward school increased while the attitude of the Non-Career Education group decreased.

One other "Group" subtest approached the designated level of significant difference (.05). This was the subtest "Attitude Toward Classmates." The F-value of 3.419 was significant at the .066 level, close to the established figure. "Sex" and "Group" data were reported in Table 63.

Career Maturity

The Career Maturity levels of students was considered an important variable for measurment in the study. A sample of Career Education and Non-Career Education students at the sixth, eighth, and eleventh grade levels participated in the data collection of this phase of the study. They completed the two sections of the CMI (Competence Test and Attitude Scale). Five scores were reported on the Competence Test: (1) a self-appraisal score, (2) a knowledge of occupation information score, (3) a goal selection score, (4) a career planning score, and (5) a problem solving score. One score only was reported for the Attitude Scale.

CMI--Sixth Grade

The CMI was administered to sixth-grade students in a pretest-posttest scheme. The first statistical treatment was an analysis of covariance of CMI scores for these students to test for any significant interaction when "Sex" and "Group" were used as classification variables. The results of the analysis were presented in Table 64. Pretest and posttest observed means were presented for the four groups (males and females classified as Career Education students and the corresponding groups classified as Non-Career Education students). The pretest scores were used as the covariate in the analysis and the posttest means (adjusted for the covariate) were also reported in Table 64.

An inspection of Table 64 revealed that no significant interactions were present, although the Attitude Score approached significance. Possibly the most important finding in the interaction test was that in one case there was a lack of interaction of the variables to a relatively high degree. This was on the second part of the CMI, the section dealing with student knowledge about jobs. The small F-value of 0.043 had a significance level of .84. The implication would be that males and females of both treatment groups were essentially equal in knowledge of occupations.

In the absence of any significant interactions, it was then considered appropriate to investigate main effects using first "Sex" and then "Group" as main effects. The results of these comparisons were contained in Table 65.

Table 64. Analysis of Covariance for CMI Scores of Sixth Grade Students (Sex X Group)

	CAREER ED						NON-CAREER ED						
	Males			Females			Males			Females			
Variable:	Pre-test $\overline{X}$	Post-test $\overline{X}$	Ad-justed $\overline{X}$	Pre-test $\overline{X}$	Post-test $\overline{X}$	Ad-justed $\overline{X}$	Pre-test $\overline{X}$	Post-test $\overline{X}$	Ad-justed $\overline{X}$	Pre-test $\overline{X}$	Post-test $\overline{X}$	Ad-justed $\overline{X}$	F-Value
Competence Test													
Self-Appraisal	7.09	8.16	8.50	7.60	9.56	9.62	7.71	8.37	8.38	8.73	9.35	8.82	0.601
Occupational Inf.	8.13	11.11	11.75	8.93	11.86	11.88	9.12	10.61	10.48	9.90	11.58	10.84	0.043
Goal Selection	7.80	8.65	8.79	7.63	9.67	9.90	8.12	8.55	8.51	8.75	9.00	8.63	1.281
Planning	8.09	10.07	10.35	8.70	11.84	11.76	8.06	8.83	9.12	9.75	10.20	9.51	0.724
Problem Solving	5.38	6.78	6.91	6.02	7.47	7.28	5.31	6.08	6.24	6.03	7.05	6.86	0.105
Attitude Scale	26.84	28.58	28.20	25.81	29.93	30.16	25.73	28.10	28.38	26.35	28.15	28.06	2.808

Table 65. Analysis of Covariance for CMI Scores of Sixth Grade Students (By Sex and By Group)

	SEX							GROUP						
	Males			Females				Career Ed			Non-Career Ed			
Variable:	Pre-test $\overline{X}$	Post-test $\overline{X}$	Ad-justed $\overline{X}$	Pre-test $\overline{X}$	Post-test $\overline{X}$	Ad-justed $\overline{X}$	F-Value	Pre-test $\overline{X}$	Post-test $\overline{X}$	Ad-justed $\overline{X}$	Pre-test $\overline{X}$	Post-test $\overline{X}$	Ad-justed $\overline{X}$	F-Value
Competence Test														
Self-Appraisal	7.39	8.26	8.44	8.14	9.46	9.23	3.078	7.32	8.78	8.99	8.15	8.80	8.57	1.062
Occupational Info.	8.60	10.87	11.14	9.40	11.72	11.38	0.183	8.48	11.44	11.81	9.46	11.03	10.64	4.167*
Goal Selection	7.95	8.60	8.65	8.16	9.35	9.29	1.989	7.72	9.10	9.27	8.38	8.75	8.56	3.085
Planning	8.08	9.47	9.76	9.20	11.05	10.68	2.208	8.36	10.85	10.97	8.80	9.43	9.29	8.426**
Problem Solving	5.35	6.44	6.59	6.02	7.27	7.08	1.556	5.66	7.08	7.07	5.63	6.51	6.52	1.918
Attitude Scale	26.30	28.35	28.29	26.07	29.07	29.15	1.456	26.39	29.17	29.06	26.00	28.12	28.24	1.995

*Indicates significance at .05 level.
**Indicates significance at .01 level.

Observed means, adjusted means, and F-values were reported.

The results reported in Table 65 revealed that no significant F-value was computed for the main effect of "Sex." Males and females were not significantly different on any of the CMI competency scores or the attitude score.

When "Group" was used as a main effect, two significant F-values were computed. One significant F-value (4.167) was computed on the second competence variable, "Occupational Information." The F-value on this variable was significant at the .05 level. An inspection of group means revealed that the Career Education students had significantly higher adjusted means than the Non-Career Education group. The other significant F-value was computed on the section concerned with student competence in career planning. The F-value of 8.426 was significant at the .01 level. An inspection of adjusted means revealed that the Career Education group again scored significantly higher than the Non-Career Education students. Therefore, it was concluded that the Career Education group knew more about jobs and career planning.

CMI--Eighth Grade

The CMI was also administered to the eighth grade group of students selected to participate in the study. The 2 x 2 analysis of covariance was computed utilizing the pretest scores as covariates.

Before considering "Sex" or "Group" differences, the analysis was checked for significant interaction effects. These data were presented in Table 66. No significant interactions were present. Therefore, the main effect variables could [illegible] analyzed. The results of the main effect analyses appeared in Table 67.

When considering the effect for "Sex," two significant differences were observed. One significant F-value (10.401) was found for the first competence

Table 66. Analysis of Covariance for CMI Scores of Eighth Grade Students (Sex X Group Interaction)

Variable:	CAREER ED						NON-CAREER ED						F-Value
	Males			Females			Males			Females			
	Pre-test $\bar{X}$	Post-test $\bar{X}$	Ad-justed $\bar{X}$	Pre-test $\bar{X}$	Post-test $\bar{X}$	Ad-justed $\bar{X}$	Pre-test $\bar{X}$	Post-test $\bar{X}$	Ad-justed $\bar{X}$	Pre-test $\bar{X}$	Post-test $\bar{X}$	Ad-justed $\bar{X}$	
Competence Test													
Self-Appraisal	9.59	9.59	10.11	10.66	12.02	11.73	9.27	8.67	9.43	11.21	11.57	10.87	0.039
Occupational Info.	10.09	11.33	12.50	12.60	13.11	12.06	10.76	10.61	11.19	12.09	12.98	12.39	3.280
Goal Selection	9.02	9.81	10.20	10.17	10.85	10.35	9.03	10.03	10.40	9.73	10.59	10.42	0.020
Planning	9.28	11.17	11.96	10.81	12.15	11.86	9.79	8.61	9.04	11.50	11.07	10.30	1.874
Problem Solving	6.31	7.59	8.05	7.36	8.55	8.34	6.24	7.45	7.96	7.89	8.29	7.72	0.491
Attitude Scale	29.59	30.74	31.28	31.26	33.94	33.28	29.54	28.58	29.15	30.77	31.39	31.09	0.002

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Table 67. Analysis of Covariance for CMI Scores of Eighth Grade Students (By Sex and By Group)

Variable:	SEX							GROUP						
	Males			Females				Career Ed			Non-Career Ed			
	Pre-test $\bar{X}$	Post-test $\bar{X}$	Ad-justed $\bar{X}$	Pre-test $\bar{X}$	Post-test $\bar{X}$	Ad-justed $\bar{X}$	F-Value	Pre-test $\bar{X}$	Post-test $\bar{X}$	Ad-justed $\bar{X}$	Pre-test $\bar{X}$	Post-test $\bar{X}$	Ad-justed $\bar{X}$	F-Value
Competence Test														
Self-Appraisal	9.47	9.24	9.85	10.96	11.78	11.26	10.401	10.09	10.72	10.87	10.49	10.49	10.33	2.774
Occupational Info.	10.34	11.06	12.00	12.32	13.04	12.24	0.672	11.26	12.16	12.30	11.60	12.10	11.94	1.206
Goal Selection	9.02	9.90	10.27	9.93	10.71	10.39	0.035	9.55	10.30	10.27	9.47	10.38	10.42	0.091
Planning	9.47	10.20	10.85	11.18	11.56	11.01	1.324	9.99	11.62	11.91	10.87	10.16	9.83	20.424
Problem Solving	6.29	7.54	8.02	7.65	8.41	8.00	0.003	6.80	8.04	8.19	7.28	7.98	7.81	0.894
Attitude Scale	29.57	29.92	30.47	30.99	32.55	32.09	9.135	30.37	32.23	32.21	30.31	30.35	30.37	11.222

variable, "Self-Appraisal" or knowing yourself. Inspection of the adjusted posttest means revealed that the females (11.26) had a significantly higher self-appraisal score than did the males (9.85). The second significant difference for "Sex" was for the "Attitude Scale" score, with an F-value of 9.135. Again, the females displayed the highest adjusted scores, 32.09 and 30.47 respectively.

More important to this study was the main effect variable "Group." For "Group," two significant F-values were found, both in favor of the Career Education students. The first significant F-value was for the competency variable "Planning." The adjusted mean for the Career Education group was 11.91, while the corresponding mean for the Non-Career Education group was 9.83.

The second significant F-value was computed for the variable "Attitude Scale." The F-value of 11.22 was highly significant beyond the .01 level. Inspection of these means revealed that the Career Education group (32.21) was again higher than the Non-Career Education group of students (30.37).

The eighth grade group of Career Education students scored higher on all but one subscore of the CMI, with two of these being significantly higher. It was concluded that the Career Education group displayed an overall superior Career Maturity Level, especially in relation to looking ahead (planning) and attitude toward a career.

CMI--Eleventh Grade

Presented in Table 68 were the raw and adjusted means and interaction F-values for the six subscores from the analysis of eleventh grade CMI scores. No significant interaction between the variables was found; therefore, main effect differences were considered. Results of the analyses of the main effect variables were presented in Table 69.

Table 68. Analysis of Covariance for CMI Scores of Eleventh Grade Students (Sex X Group)

Variable:	CAREER ED						NON-CAREER ED						
	Males			Females			Males			Females			
	Pre-test $\overline{X}$	Post-test $\overline{X}$	Adjusted $\overline{X}$	Pre-test $\overline{X}$	Post-test $\overline{X}$	Adjusted $\overline{X}$	Pre-test $\overline{X}$	Post-test $\overline{X}$	Adjusted $\overline{X}$	Pre-test $\overline{X}$	Post-test $\overline{X}$	Adjusted $\overline{X}$	F-Value
Competence Test													
Self-Appraisal	12.34	11.50	11.86	13.59	14.02	13.57	11.63	11.15	11.98	13.07	13.76	13.64	0.964
Occupational Info.	13.45	13.79	14.43	14.63	15.09	14.80	13.96	14.33	14.57	15.00	15.83	15.25	0.768
Goal Selection	11.57	12.05	12.45	12.68	13.40	13.15	11.59	13.52	13.90	12.90	13.76	13.38	1.665
Planning	11.55	12.43	13.03	12.89	13.67	13.45	12.30	14.41	14.56	13.62	14.34	13.68	1.681
Problem Solving	9.61	10.20	10.57	10.85	11.30	10.85	9.07	10.30	11.02	10.24	11.10	11.06	0.0787
Attitude Scale	33.34	33.32	33.59	34.47	35.13	34.67	32.93	32.22	32.76	33.21	34.52	34.87	0.599

Table 69. Analysis of Covariance for CMI Scores of Eleventh Grade Students (By Sex and By Group)

	SEX							GROUP						
	Males			Females				Career Ed			Non-Career Ed			
Variable:	Pre-test $\overline{X}$	Post-test $\overline{X}$	Ad-justed $\overline{X}$	Pre-test $\overline{X}$	Post-test $\overline{X}$	Ad-justed $\overline{X}$	F-Value	Pre-test $\overline{X}$	Post-test $\overline{X}$	Ad-justed $\overline{X}$	Pre-test $\overline{X}$	Post-test $\overline{X}$	Ad-justed $\overline{X}$	F-Value
Competence Test														
Self-Appraisal	12.11	11.39	11.90	13.46	13.96	13.59	14.708***	13.10	13.04	12.90	12.38	12.50	12.85	0.047
Occupational Info.	13.61	13.96	14.47	14.72	15.28	14.91	1.008	14.17	14.58	14.65	14.50	15.11	14.92	0.320
Goal Selection	11.58	12.53	12.92	12.73	13.49	13.21	0.036	12.24	12.87	12.88	12.27	13.64	13.63	3.143
Planning	11.80	13.07	13.53	13.07	13.84	13.51	0.205	12.36	13.18	13.29	12.98	14.38	14.10	3.034
Problem Solving	9.43	10.23	10.72	10.70	11.25	10.90	0.128	10.36	10.87	10.74	9.68	10.71	11.04	0.567
Attitude Scale	33.20	32.96	33.32	34.16	34.97	34.72	5.669**	34.03	34.42	34.25	33.07	33.41	33.85	0.221

When "Sex" was investigated as a main effect, two significant F-values were found to be present, the same two which were significant for the eighth grade students. One was for the competence variable, "Self-Appraisal." The other was for the "Attitude Scale" score. As was the case with the eighth grade group, the females displayed higher scores on both variables. No other "Sex" differences were found.

When "Group" was isolated as a main effect, no significant differences were found between the Career Education and the Non-Career Education groups.

In summary, it appeared that overall, the Career Education group displayed a somewhat higher Career Maturity level than the Non-Career Education group. In all, four CMI scores differed significantly for "Group." In each case, the Career Education group was higher. Most other adjusted scores, although not significantly higher, were in favor of the Career Education group.

The greater emphasis placed on Career Education in the lower grades would account for the differences there and not at the eleventh grade level.

Motivation

The JIM Scale was utilized to assess student motivation relative to school. A single motivation score was reported for this instrument. Eighth and eleventh grade students completed the JIM Scale as a part of this data collection phase of the study.

JIM Scale--Eighth Grade

The JIM Scale was administered in a pretest-posttest scheme to eighth grade students. The first statistical treatment was an analysis of covariance of JIM Scale scores in order to identify possible interaction effects of the two classification variables. The resulting means and F values were presented in Table 70.

Table 70. Analysis of Covariance of JIM Scale Scores of Eighth Grade Students (Sex X Group)

	CAREER ED						NON-CAREER ED						
	Males			Females			Males			Females			
Variable:	Pre-test $\bar{X}$	Post-test $\bar{X}$	Ad-justed $\bar{X}$	Pre-test $\bar{X}$	Post-test $\bar{X}$	Ad-justed $\bar{X}$	Pre-test $\bar{X}$	Post test $\bar{X}$	Ad-justed $\bar{X}$	Pre-test $\bar{X}$	Post-test $\bar{X}$	Ad-justed $\bar{X}$	F-Value
JIM Score	102.24	98.54	102.41	110.15	101.77	100.09	112.97	105.59	101.94	107.94	106.85	106.72	1.539

Table 71. Analysis of Covariance of JIM Scale Scores of Eighth Grade Students (By Sex and By Group)

	SEX							GROUP						
	Males			Females				Career Ed			Non-Career Ed			
Variable:	Pre-test $\bar{X}$	Post-test $\bar{X}$	Ad-justed $\bar{X}$	Pre-test $\bar{X}$	Post-test $\bar{X}$	Ad-justed $\bar{X}$	F-Value	Pre-test $\bar{X}$	Post-test $\bar{X}$	Ad-justed $\bar{X}$	Pre-test $\bar{X}$	Post-test $\bar{X}$	Ad-justed $\bar{X}$	F-Value
JIM Score	106.39	101.27	102.23	108.89	104.67	103.88	0.189	105.87	100.02	101.35	109.74	106.40	105.01	1.170

The most obvious pattern which was identified from Table 70 was that all four groups had lower posttest motivation scores than their pretest scores. This may be a reflection of the timing of the posttest which came near the end of the school year. It may be that students were more enthusiastic about school-related subjects near the beginning of the school year. Possibly, with end-of-the-year activities and the anticipation of vacation time, motivational levels relative to school could be expected to be lower than they would be earlier in the school year.

The interaction effect of the two classification variables was non-significant. Thus, it was considered appropriate to investigate the main effects separately. The results of this investigation were reported in Table 71.

The motivational levels of male and female students were lower on the posttest than on the pretest. However, the adjusted posttest scores were not significantly different. The same pattern held for the students in the two treatment groups (Career Education and Non-Career Education). Motivation levels, as measured by the JIM Scale, were lower at the end of the school year. However the levels of the two groups, when adjusted by the pretest score, were not significantly different at the time of posttesting as indicated by the small F-values.

JIM Scale--Eleventh Grade

The motivation levels of eleventh grade students were also determined through the administration of the JIM Scale. The observed and adjusted means and F-values for the analysis of interaction effects were presented in Table 72. No significant interaction was observed and the main effects were investigated separately. This analysis was presented in Table 73.

As was the case with eighth grade students, some of the motivation scores decreased. However, Career Education females increased. Considering the classification variable "Sex," no significant difference was present in

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Table 72. Analysis of Covariance of JIM Scale Scores of Eleventh Grade Students (Sex X Group)

Variable:	CAREER ED						NON-CAREER ED						
	Males			Females			Males			Females			
	Pre-test $\bar{X}$	Post-test $\bar{X}$	Ad-justed $\bar{X}$	Pre-test $\bar{X}$	Post-test $\bar{X}$	Ad-justed $\bar{X}$	Pre-test $\bar{X}$	Post-test $\bar{X}$	Ad-justed $\bar{X}$	Pre-test $\bar{X}$	Post-test $\bar{X}$	Ad-justed $\bar{X}$	F-Value
JIM Score	105.55	104.32	107.35	113.65	115.30	112.78	110.91	109.10	108.46	107.44	102.12	103.86	2.661

Table 73. Analysis of Covariance of JIM Scale Scores of Eleventh Grade Students (By Sex and By Group)

Variable:	SEX							GROUP						
	Males			Female[illegible]				Career Ed			Non-Career Ed			
	Pre-test	Post-test	Ad-justed	Pre-test	Post-test	Ad-justed	F-Value	Pre-test	Post-test	Ad-justed	Pre-test	Post-test	Ad-justed	F-Value F-Value
JIM Score	106.74	105.38	107.60	112.41	112.66	110.00	0.018	110.23	110.66	110.49	109.02	105.30	105.96	1.635

their motivation score, although the boys did decrease and the girls increased their score.

When considering "Group," a significant difference didn't result. However, the motivation score of the Career Education group (110.49) was higher than the Non-Career Education group (105.96). During the year, the motivation level of the Career Education students had increased while the motivation level for the Non-Career Education students decreased.

Absenteeism

Records of student absenteeism were obtained to ascertain whether students engaged in a Career Education program missed fewer days from school than Non-Career Education students. Because of the difficulty of obtaining such data for all grades and because this measure was considered more appropriate for the older age group of students, only the eleventh grade students in the study were considered for this analysis. It was hypothesized that absenteeism at the lower grade levels would not be a program related factor to the extent that it would be at the secondary level, where students voice more of a choice as to whether or not they attend school. Tenth grade absenteeism was used as the pretest value.

Absenteeism--Eleventh Grade

The results of the interaction analysis for days absent from school were presented in Table 74 . The table also contained pre and post means by "Sex" and "Group." No significant interaction was present. Both groups missed about the same number of days per year, with the females being absent slightly more often.

No significant differences were present for the main effect variables, "Sex" and "Group." The females as a group missed more than the males, but not significantly more. Similar results were found for "Group." The

Table 74. Analysis of Covariance for Absenteeism of Eleventh Grade Students (Sex X Group)

	CAREER ED						NON-CAREER ED						
	Males			Females			Males			Females			
Variable:	Pre-test $\bar{X}$	Post-test $\bar{X}$	Adjusted $\bar{X}$	Pre-test $\bar{X}$	Post-test $\bar{X}$	Adjusted $\bar{X}$	Pre-test $\bar{X}$	Post-test $\bar{X}$	Adjusted $\bar{X}$	Pre-test $\bar{X}$	Post-test $\bar{X}$	Adjusted $\bar{X}$	F-Value
Days Absent	4.42	3.99	3.98	4.40	4.31	4.30	5.00	4.43	4.30	3.63	4.88	5.03	0.249

Table 75. Analysis of Covariance for Absenteeism of Eleventh Grade Students (By Sex and By Group)

	SEX							GROUP						
	Males			Females				Career Ed			Non-Career Ed			
Variable:	Pre-test $\bar{X}$	Post-test $\bar{X}$	Adjusted $\bar{X}$	Pre-test $\bar{X}$	Post-test $\bar{X}$	Adjusted $\bar{X}$	F-Value	Pre-test $\bar{X}$	Post-test $\bar{X}$	Adjusted $\bar{X}$	Pre-test $\bar{X}$	Post-test $\bar{X}$	Adjusted $\bar{X}$	F-Value
Days Absent	4.59	4.12	4.07	4.18	4.47	4.50	1.636	4.41	4.18	4.16	4.20	4.69	4.72	1.654

Non-Career Education group missed somewhat more school than the Career Education group, but not significantly more (Table 75).

Occupational Aspiration

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OAS--Tenth Grade

The Occupational Aspiration Scale (OAS) was used to collect data relative to the occupational aspirations of two sample groups of tenth grade students. Pretest data were collected in the spring of 1973 and posttest data in the spring of 1974. The same data analysis technique reported in the previous sections of the Student Component was utilized with respect to data of occupational aspirations. The pretest-posttest design allowed testing on the null hypothesis that the Career Education program had no effect on the level of occupational aspirations of tenth grade students.

The results of the test for interaction of the main effects were reported in Table 76. As before, adjusted posttest means, and F-values were shown.

There was no interaction of the classification variables as indicated by the low (0.634) F-value. The main effects were then introduced separately and Table 77 contained a summary of the means and F-values computed.

An inspection of Table 77 revealed that neither "Sex" nor "Group," when used as main effects, produced significant F-values. Males and females had relatively similar aspiration levels. Likewise, Career Education students and Non-Career Education students had similar aspirations. The one pattern which was obvious was that aspiration levels were lower at the time of posttesting than they had been on the pretest. This was true for males and females; it was true for the two treatment groups.

Table 76. Analysis of Covariance of OAS Scores of Tenth Grade Students (Sex X Group)

Variable:	CAREER ED						NON-CAREER ED						
	Males			Females			Males			Females			
	Pre-test $\overline{X}$	Post-test $\overline{X}$	Ad-justed $\overline{X}$	Pre-test $\overline{X}$	Post test $\overline{X}$	Ad-justed $\overline{X}$	Pre-test $\overline{X}$	Post test $\overline{X}$	Ad-justed $\overline{X}$	Pre-test $\overline{X}$	Post-test $\overline{X}$	Ad-justed X	F-Value
OAS Total	45.59	42.35	41.23	41.24	40.90	41.60	41.03	38.79	39.57	43.07	42.54	42.48	0.634

Table 77. Analysis of Covariance of OAS Scores of Tenth Grade Students (By Sex and By Group)

Variable:	SEX							GROUP						
	Males			Females				Career Ed			Non-Career Ed			
	Pre-test $\overline{X}$	Post-test $\overline{X}$	Ad-justed $\overline{X}$	Pre-test $\overline{X}$	Post-test $\overline{X}$	Ad-justed $\overline{X}$	F-Value	Pre-test $\overline{X}$	Post-test $\overline{X}$	Ad-justed $\overline{X}$	Pre-test $\overline{X}$	Post-test $\overline{X}$	Ad-justed $\overline{X}$	F-Value
OAS Total	43.80	40.95	40.57	42.13	41.69	32.03	1.084	43.46	41.64	41.41	42.22	40.97	41.27	0.010

Chapter 6

FINDINGS
PROJECT MANAGEMENT COMPONENT

The Career Education Project for Region XII had the following overall objectives:

a. To develop positive attitudes toward self, others, school and work;

b. To create an awareness of career possibilities;

c. To prepare youth for a successful, satisfying and meaningful career that is related to the needs of society;

d. To create more relevance in education by integrating the world of work with the curriculum;

e. To capitalize on and integrate the experiences of family, school and occupational community.

Evaluation of the achievement of these objectives could be done only in the context of the total project and was not attempted here. The first year the project had the following intermediate objectives:

a. Plan, conduct and evaluate an Educational Needs Assessment for the area;

b. Plan and conduct a School System Coordinator's (SSC) In-service that would:

    (1) Orient them to Career Education philosophy and project objectives;

    (2) Provide opportunities for input from LEAs;

    (3) Determine operational strategy for CATs;

    (4) Schedule dates with regional staff for status reports; and

    (5) Determine communication system.

c. Plan and conduct a one-day CAT In-service that would:

    (1) Orient them to Career Education philosophy and project objectives;

    (2) Determine each member's role; and

    (3) Give input into the development of a strategy for implementing Career Education into LEAs.

d. Plan and conduct a Principal's Orientation Workshop that would:

   (1) Orient principals to Career Education philosophy and to the Career Education project.

   (2) Acquire principal's support and involvement; and

   (3) Get input from principals concerning the project.

e. Design an agenda, schedule dates, contact consultants, select sites, secure materials, notify participants, and conduct a workshop that would:

   (1) Further orient CATs to Career Education philosophy;

   (2) Discuss regional Career Education needs;

   (3) Discuss integration of Career Education into curriculum;

   (4) Determine integration techniques;

   (5) Promote strategy for involvement of community in Career Education;

   (6) Determine Career Education unit formats;

   (7) Write integrated units; and

   (8) Provide a model for teacher attitudes, techniques, knowledge and experiences for Career Education.

f. Design a communication system that would:

   (1) Develop communications from regional staff to SSC;

   (2) Develop communications from SSC to LEA CATs;

   (3) Develop communications between LEA CATs in the region; and

   (4) Develop communications from SSCs to regional staff.

g. Provide and lead the following supportive implementation services to the CATs and LEA staff as necessary to include:

   (1) Identification and use of materials;

   (2) Review of unit formats and implementation techniques;

   (3) Production, location, and interpretation of surveys, tests, and other evaluative techniques and instruments; and

   (4) Planning and conducting meetings in each LEA of Career Education status.

These objectives, which became in effect management tasks to be accomplished, were guides to the development of the following specific objectives for determining the evaluation of the management of the project:

1. To determine the extent to which project goals were articulated and clarified to all persons concerned with the achievement of them;
2. To determine the extent to which project managers were supportive in facilitating the work of all persons responsible to them;
3. To determine the extent to which project managers utilized physical facilities and materials in carrying out the project;
4. To determine the procedures and techniques used in carrying out the project and to identify those which appear to be unusually effective or ineffective in the achievement of goals.

The findings were presented according to the objectives outlined for this section of the study.

Objective 1 To determine the extent to which project goals were articulated and clarified to all persons concerned with the achievement of them.

All the evidence collected in this evaluation indicated that the goals of the project were clarified and understood by the participants in the project. Although the five stated overall goals were frequently shortened into two major goals in the responses of the participants, the shortened version seemed to lose no real meaning in the process. The shortened version was: 1) to develop awareness and preparation for careers, and 2) to make realistic and relevant the normally dull and abstract school experience.

The clarification of goals was accomplished by the administrative staff through a conscious effort in many meetings--orientation, in-service and workshops--and in daily contacts with participants.

A feature of the formally planned efforts to clarify goals of the project was the meetings with different groups as entities, i.e., superintendents with superintendents, principals with principals, etc. This was a productive effort for it enabled the participants to deal with their special role-related concerns and interests. Communication seemed to be easier when groups were composed of similar role-occupants and there were not status barriers. Concerns and perceptions were alike and could be dealt with effectively.

The administrative staff in the effort to clarify goals emphasized the unity of the goals of the project and the goals of the school districts in improving instruction. This was a major factor in gaining acceptance and clarification of project goals. It also had the advantage of demonstrating that the Career Education program was not something totally different and foreign to what school districts were already doing.

Objective 2 To determine the extent to which project managers were supportive in facilitating the work of all persons responsible to them.

A distinctive feature of the reactions of participants in the project was the unanimous opinion that the participants' feelings of success in the Career Education project were due to the unstinting efforts and productive assistance given by the project staff. Many expressions such as "They came when I called," "He provided real help," "Knowing they were available for assistance was a comfort," and "The help provided really saved me" were heard in the interviews.

The project management staff made a commitment to the CET teachers that each one would be visited twice before Christmas. This was seen as very important to the participants as it provided a tie between workshop activities and what happened in the project later in the year. Although the staff was unable to completely fulfill the commitment, it served to insure participants that interested, concerned assistance was available.

The project managers were judged to be completely supportive.

Objective 3 To determine the extent to which project managers utilized physical facilities and materials in carrying out the project.

The nature of the activities of the project was such that regular school facilities could be utilized effectively. Meeting rooms in the schools were used for workshops, orientation and in-service activities. A major feature of the project was the provision of training which enabled teachers to develop their own materials for use in the classroom. Developing their own materials had two very great advantages. First, developing their own materials assured teachers of having materials when they needed them; thus they were not subject to the discouragement of not having needed materials available. Second, developing their own materials gave teachers a feeling of identification with the materials as being their own.

Objective 4 To determine the extent to which project managers utilized human resources, both within and outside the school system, in carrying out the project.

The evidence collected indicated that there was very effective use of available human resources by the project managers. Several consultants covering a range of competencies were used in the planning and training sessions. They were carefully selected in terms of the particular skills needed and were deployed in ways to maximize effectiveness. Clear and precise instructions were given the consultants on what they were to do and what they were expected to accomplish. In addition, the project management staff monitored their performance as much as was practical. These efforts and the quality of consultants employed resulted in a high quality of practical instruction being provided and participants developed the competencies necessary to carry the project forward in their assigned areas of responsibility. The feelings of security resulting from the developed competencies were a major factor in the success of the project. Additionally, human resources within the school districts were well used. By the end of the first year of the project, personnel from within the districts with particular skills were being used in most effective ways across district boundaries. That is, staff members from one school district were serving as consultants in other school districts. This was almost unprecedented among these districts. The excellent job of getting understanding and support of the principals contributed significantly. It is doubtful that the project could have moved forward nearly as well as it did had it not been for principals' involvement and support.

The effective deployment of human resources to counter deviations which had the potential to obstruct the achievement of goals was outstanding.

Objective 5 To determine the procedures and techniques used in carrying out the project and to identify those which appear to be unusually effective or ineffective in the achievement of goals.

The success of the project managers in carrying out the Career Education Project in Region XII appeared to be due to several especially effective practices utilized. Each of these will be identified and illustrated in the following discussion.

1. The project managers deliberately sought to develop full understanding of the project, its values, procedures, difficulties and necessary actions, with an orientation program for all participants very early in the project.

The superintendents of the participating school districts serve as the board of directors of the educational cooperative in which the project was housed. Due to extended negotiations during the period of the initiation of the project, superintendents became very familiar with the project and what it proposed to do. Despite this orientation, project managers arranged several meetings, both group and individual, to assure that superintendents did truly understand ~~and~~ were given the opportunity to have their ideas regarding the project considered. Out of these efforts developed a feeling that the project truly belonged to them and that they approved. This understanding proved to be invaluable during the conduct of the project.

The project managers recognized early that the understanding of the school principals was extremely important in the success of the project. A retreat, geographically away from the project location, was planned for principals. The fine accommodations and excellent food provided at the retreat contributed to a feeling of importance for the meeting. Explanations of the project were sufficient that principals felt secure in explaining and justifying the project to teachers. Two days were scheduled for the principals' meeting which gave ample time for explanations and discussions. The understandings which were developed were felt to be of special importance in the conduct of the project.

Meetings, both group and individual, were also held with the district coordinators. Opportunities for questions and discussions were provided for complete understanding.

Similar meetings, both project group and individual school district, were conducted for counselors and classroom teachers.

The orientation program, to develop full understanding of the project on the part of all participants, was an effective practice and contributed significantly to the success of the project.

2. The project managers deliberately sought specific commitments from participants.

At every opportunity, the project managers asked for and received commitments from participants for specific actions which the participants were capable of achieving. The purpose of this practice was to develop, through positive involvement and successful achievement, a commitment to the total project. The project managers were careful to ask for commitments within the capability of the participants to discharge. Illustrative of the commitments asked was that each classroom teacher member of the CETs would develop and teach two units in Career Education during the year. The teachers responded to the commitment and far exceeded the committed number of units developed and taught.

Other participants were asked to reduce to writing--with one copy for themselves and another copy for the project management--their plans for supporting and implementing the project. Participants were able to select tangible goals that could be achieved. Other actions of the project management contributed to the building of commitment to the project. Each LEA developed and wrote a plan for the district. In every meeting of the management staff with participants, extensive opportunity for participant input of ideas was provided. Adjustments were made in the program to allow for local differences and needs.

There developed among the participants a strong inclination to make it work. These feelings of commitment no doubt contributed substantially to the success of the project.

3. The project managers developed a program of practical, usable training for participants.

Possibly the practice utilized by management which was most influential in the success of the project was the development of a training program for participants, seen by them as practical, useful, and within their capability to master. The training was reduced to simple steps which could be mastered. Precautions were taken to keep trainees from being overwhelmed. High probability of success was built-in. In other words, the training program did indeed develop competencies of the teachers which they saw as necessary for their successful performance in the project. This training developed feelings of confidence which enabled participants to enter into project activities without fear of failure or inadequacy.

The training units were carefully designed and the training staff was rigorously selected for their ability to competently instruct. Ample time was allowed for the training and consequently teachers were given the feeling they could master the skills before the program was over.

4. The project management provided support, encouragement and reinforcement for the participants' efforts.

All new educational programs probably cause some feelings of insecurity on the part of participants. The project management did much to overcome these feelings with the training program which developed feelings of competence on the part of participants to do the necessary tasks. Additionally, assurances of help with problems as they arose were given and the management staff made special efforts to respond to calls immediately upon receipt. At first, efforts were made to respond as a team. This was soon found to be ineffective because of time limitations and the procedure was changed for individual project management members to respond to requests for help. Participants were appreciative of the fact that help was quickly available. Help was provided in materials, ideas, and procedures.

Project managers also deliberately used opportunities to express interest, encouragement, and reinforcement to the efforts of participants. One participant well summarized the importance of these efforts with the statement "You just couldn't help but succeed with the great support and encouragement they (project management) gave us."

The management of the Career Education Project for Region XII articulated and clarified goals, supported and facilitated the work, utilized physical facilities and materials, utilized human resources, and utilized a number of techniques in carrying out the project. It is the judgment of the evaluator that they were effective and efficient in their performance.

CHAPTER 7

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Community Component

The primary objective of the community component of the Hazard Research Project was to evaluate the extent and effectiveness of community participation in the Hazard Career Education Project. Two instruments were developed to secure data from 1) a random sample of the adult population and 2) key educators (principals) in the participating schools.

Key Educators' Survey

Nearly three-fourths of the involved schools reported. Distribution of respondents was scattered throughout the region, but more were received from the more populous Perry, Letcher and Knott counties. This might lead the reader to conclude that, relatively speaking, more Career Education was taking place in these counties.

Nearly one-half of the respondents indicated that their schools had a written policy on Career Education. Only two key educators sent copies of policy statements, but these were comprehensive documents including plans for community involvement. It appeared that most schools did not have extensive plans or policies.

Newspaper coverage of the Career Education program in the region had increased since the start of the school year in three-fourths of the schools, but these respondents indicated a need for increased radio and television coverage was needed.

When queried about public interest in Career Education, most respondents felt that parents were in favor of and involved in Career Education, but, 90 percent of the principals indicated that more was needed. It was apparent that parents were the leading segment of the public in knowledge of, and interest in Career Education. This could be expected since their children are the direct beneficiaries of the program.

Principals believed local resource people were available, were used, and were helpful in the Career Education program. Personal contacts by teachers, telephone contacts, student requests, and requests from the principal were the primary means used to secure resource people. Letters to speakers and/or their employers were the most common means of follow-up.

Advisory committees were used by about 40 percent of the school responding. Of these, committees for the total program and special committees for Career Education were predominate. Nearly all key educators (96 percent) rated their advisory committees "moderately effective" or "very effective" in assisting with the Career Education program.

Public Awareness of Career Education (PACE) Survey

Randomly selected respondents to the PACE questionnaire were predominately married, white males with a high school education and earning over $3,000 per year. Average age was 47 years. Respondents averaged more than three children of which one was still in school. Most respondents agreed that 1) their schools should have Career Education, 2) schools should help people get ready to work, 3) the school counselor is important in setting up Career Education, 4) the major purpose of Career Education is to help youth explore means of earning a living, 5) work experience is important in Career Education, and 6) workers can be valuable resource people for Career Education programs.

Respondents most strongly disagreed that 1) Career Education was for students not able to do regular course work, 2) students knew enough about future jobs to make career decisions, 3) people knew enough about the Career Education program in the local community, 4) Career Education for girls should be for jobs as secretaries, nurses, or teachers, and 5) teachers were prepared to teach Career Education. These findings indicated that respondents generally had a good understanding of what the Career Education program was and what it should be doing. However, it also indicated that lack of agreement and much uncertainty existed about many of the concepts embodied in Career Education. Therefore, much remained to be done in informing the public about the operation, expectations and limitations of Career Education in the Hazard Region schools. This conclusion added weight to the key educators' expression of need for more public involvement.

Respondents from the "35 years and older" and the "34 years and younger" age group differed significantly in their responses to 14 statements on the PACE instrument. The younger group indicated greater disagreement than the older group in all but one of the 14 items. This would tend to imply that, perhaps due to more recent experience in the school, the younger were more informed about the total school program. Conversely, older citizens who may not have children in school or any other formal contacts with the school, appeared to be less well informed.

Fifteen items on the PACE survey were found to be significant between groups of citizens with different levels of education. Relatively little difference (significant disagreement on only three items) was found between those with grade school education and people having high school. High school-level respondents disagreed significantly with college level respondents on seven items and grade school educated respondents disagreed with college people on eleven items. People with more education tended to disagree more. This indicated people with increased education levels tended to be more discerning and perhaps even critical of the Career Education programs.

Sex of the respondent appeared to have little effect on response to the PACE survey, even in the case of several statements regarding Career Education and girls. This finding may reflect the changing (liberalized) attitudes on the part of both men and women.

Similarly, little difference was found between respondents who were married or not married (single, divorced or widowed). Only three items were found to be significant, and these could be due to the effect of children rather than because of marital status.

A substantial difference in responses occurred when analyzed on the basis of family size of the respondents. People with no children disagreed with respondents having children on 15 items. Relatively more disagreement occurred between the group having no children and the respondents with three or more children. As would be expected, people with children appeared to be better informed about Career Education in the schools. Little difference was found between the responses of those who had children in school and respondents who did not. This indicated that people with children, regardless of whether they are in school or not, had a similar outlook toward Career Education.

Significant differences were found to exist between responses of people having different levels of income. Fourteen statements were disagreed upon, mostly between those making less than $3,000 versus those people in the middle income ($3,000-$10,000) group. People in the higher income levels appeared to be more discerning and more critical of the Career Education program. This might also be related to their higher educational levels.

Recommendations

Based upon analysis of the data, it was recommended that:

1. Efforts be made to involve more schools in the region in active Career Education programs.

2. Encouragement and further assistance be given Career Education school personnel in the development of extensive written policies covering the Career Education program in their respective schools.
3. Schools be encouraged to continue and increase newspaper coverage of their Career Education programs, and to initiate contacts with radio and television stations in the area so that these media may also be utilized to "tell the Career Education story."
4. Continued and increased emphasis be placed on securing parent involvement in the Hazard Career Education program.
5. Continued and expanded use be made of resource people, including keeping coordinated records of qualified individuals and making lists available to teachers of Career Education.
6. Formation and/or utilization of advisory committees, especially those specific to the Career Education program, be encouraged at all schools.
7. Assistance from project personnel be made available to help schools properly utilize Career Education Advisory Committees.
8. Continued and increased efforts be made to inform the public about Career Education in the local schools.
9. Increased efforts be made to create a positive image of the schools and Career Education program in the eyes of the young adults the region.
10. Increased efforts be made to inform older citizens about the school program, including Career Education.
11. Greater efforts be made to inform the less well educated members of the community and to involve or otherwise create a more desirable image of Career Education in the eyes of the better educated citizens.

12. Men and women be treated equally in all efforts to involve the community in the Career Education program.
13. Special efforts be made to inform people in the region who do not have children about Career Education and to involve them in the local programs.
14. Efforts to inform and involve parents in Career Education be extended to all people with children, whether their children are presently in school or not.
15. Efforts be made to inform the poor and to improve the image of Career Education held by those in the higher income and educational levels in the region (perhaps through greater involvement).

Professional Staff Component

The Professional Staff Component was designed to assess the knowledge and attitude of staff members concerning Career Education, identify factors which contributed to the successful development of a Career Education program, identify successful personnel development techniques, and identify problems encountered in implementing Career Education.

The design involved a pretest-posttest measure of teacher knowledge and attitude of Career Education. In addition, questionnaire and interview techniques were employed. Since the goal was to identify successful techniques and problems encountered, only the participating Career Education teachers from the region were selected to participate in the study, this group being comprised of the teachers who had attended the summer Career Education Workshop in 1973 and who subsequently had participated in the development and teaching of Career Education units. Responses from one hundred forty-one personnel were tabulated and analyzed.

Teacher Questionnaire

Results from the teacher questionnaire were cross tabulated by sex, age of respondent, and level taught. The teachers were asked what they considered to be the most effective means of increasing their knowledge and understanding of Career Education. There was total agreement from all teachers that the Regional Career Education Staff from Hazard had been the most effective. Second was their own system's Career Education Coordinator. Teachers from other schools ranked third.

They also felt that the Hazard Staff was the most influential in increasing their positive attitude toward Career Education, with the coordinator being second and teachers from other schools third. In appeared that a project of this nature can and should make use of a strong central staff which is committed to helping the local teachers. It was interesting that teachers consistently rated teachers and counselors from other school higher than their own colleagues.

Concerning which activities were most effective in increasing teacher knowledge of Career Education, all groups of teachers agreed that the summer workshops were the most effective, followed by regional Career Education conferences. All agreed that university courses were the least effective. However, they failed to realize that the summer workshops were organized as summer courses carrying university credit. They were apparently indicating a concern that the regular teacher education programs were doing little in relation to Career Education. This complaint was probably true and could be easily substantiated.

Overall, the teachers were consistent in their opinion that teaching Career Education units was the most effective means of conveying Career Education concepts to students. Field trips ranked second, followed by using resource people. However, the under 30 and over 50 age groups of teachers differed on this point. Both groups felt that field trips were the most effective. The older teachers also thought that class projects were very effective, followed by resource persons ranking third. For this group, teaching Career Education units ranked a low fourth.

When controlling for level taught, the elementary teacher felt field trips were the most effective and resource persons were not too effective.

All groups rated utilizing Career Education related examples or methods to supplement regular materials as the least effective method. It was this author's opinion that the low rating on this item resulted from a poorly stated question. It was meant to mean integrating Career Education into the regular school curriculum, not an add-on. The personal interviews substantiated this idea. The teachers interviewed all agreed that they integrated Career Education into their teaching even when they weren't doing Career Education units.

The teachers were also all in agreement on the most effective means of securing resource persons for class. Ranked first was personal contact by teacher, followed by telephone contact by teacher and personal contact by teacher. Least effective was arrangement by administrator, although the elementary teachers rated this somewhat higher than the junior high or high school teachers.

As a group, the teachers felt that use of hands-on class projects was the best way to motivate students, with field trips second. However, the junior high and high school teachers ranked field trips lower than the elementary. This was probably due to the difficulty encountered by these two groups in organizing such a trip. A large block of time was available to the elementary teacher with little arranging to be done.

What factors contributed to program success? The teachers were in total agreement that in-service education prior to program implementation was the most important factor. This was followed by administrative support and leadership from a source such as the Regional Career Education Staff. Although important, the teachers felt that parental and community support, prepared instructional materials, and special facilities were less important. This finding was as anticipated. The teachers needed to learn enough about Career Education prior to implementation to feel secure in their teaching. Also, during the personal interviews, they made constant reference to the need for administrative support. Overall, they felt quite secure in their ability to teach in a Career Education program. They ranked themselves and others who had attended the summer in-service workshops as being very knowledgeable of Career Education. Also, they indicated that feeling secure in teaching Career Education units was no problem.

Identification of problems which the teachers encountered in implementing Career Education was a major consideration in the study. The most severe of these problems centered around time and money. Insufficient funds for materials ranked highest, followed by insufficient time to plan with other teachers, insufficient funds for field trips, and insufficient individual planning time. Other teachers not accepting Career Education was also considered to be a problem. Feeling confident in teaching and being able to interest students did not appear to be a problem.

The elementary teachers felt that lack of Career Education materials was a problem. Funds for field trips and other teachers accepting Career Education were not perceived as being real problems to them when compared to the junior high and high school teachers. High school teachers ranked the problem of other teachers not being willing to participate in Career Education higher than the other groups.

Recommendations

1. Implementation of Career Education programs on a regional basis be preceeded by the establishment of a regional organization to manage the program.
2. System and/or building Career Education coordinators be assigned and provided with in-depth orientation.
3. Teachers be encouraged to visit other systems and observe the activities of other teachers considered to be effective Career Education teachers.
4. Efforts be made to encourage the teacher education and counselor education faculties of the universities to become more active in Career Education.
5. Implementation of a Career Education program be preceeded by extensive in-service education programs.
6. A cadre of teachers be established to serve as a model and to assist other teachers through individual system or building in-service activities.
7. Teaching Career Education units be encouraged as a means of initiating teacher activity in Career Education.
8. Integrating Career Education into the total school curriculum be encouraged as the means of spreading and perpetuating the Career Education concept.
9. Field trips and use of resource persons be utilized by all teachers in an effort to involve the community in the total educational program.
10. Steps be taken to insure that blocks of time for resource persons and field trips be made available to junior high and high school teachers.
11. Hands-on class projects requiring the incorporation of several subject matter areas be encouraged as a method of showing the relevancy of all school subjects.

12. Administrative actions be taken to insure total administrative support at all levels, particularly at the building principal level.
13. Funds be provided for the purchase of supplemental teacher materials.
14. Time be allotted for individual and joint planning of several teachers. Team efforts were judged to be most effective.
15. Administrative efforts be directed toward the involvement of all teachers.

Student Component

The student component was designed to assess the effects of a Career Education program on selected student variables. These variables included: academic achievement, attitudes, career maturity, motivation, occupational aspiration, and absenteeism. A sample of fourth, sixth, eighth, tenth, and eleventh grade students was selected to participate in the study. The design included a pretest-posttest scheme. The analysis of covariance technique was used to test for significant differences between Career Education and Non-Career Education students, with the pretest scores used as covariates in the analysis.

Academic Achievement

Academic achievement was measured by use of the 11 scales of the Comprehensive Tests of Basic Skills (CTBS). As had been expected, academic achievement levels did not vary to any great extent between the groups. For the fourth grade students, no significant differences were observed between the Career Education and the Non-Career Education groups. However, several sex differences were found. For math concepts, math application, and reading comprehension, the males had significantly higher scores. Females were higher in spelling. These sex differences were not totally unexpected, since sex differences have previously been identified in the area of mathematics. Males, as a group, have traditionally scored somewhat higher in math. The difference in reading was not expected.

When the hypotheses were tested with data from eighth grade students, again, few differences were found. Males had significantly higher posttest scores than did females on math computations. This was similar to the fourth grade findings, where males also achieved higher scores than females in the math areas.

When comparisons were made between the Career Education and the Non-Career Education groups, one significant difference was found for eighth graders. This was for math computation. The Career Education group had a significantly higher posttest mean.

For eleventh grade, no significant differences were observed between males and females or between the Career Education and the Non-Career Education groups.

Attitudes

Attitude scores were computed for six areas for fourth, eighth, and eleventh grade students. These areas were attitude toward self, toward classmates, toward reading, toward school, toward math, and citizenship (the latter being for eighth and eleventh only).

No sex differences were observed in the attitude scores of fourth grade students. The attitudes of males and females tended to be quite similar. However, when group was considered, one significant difference was found. The Career Education group had a significantly higher score than the Non-Career Education group for the variable "Attitude Toward Math."

The finding that Career Education students had a better attitude toward math might be considered an indication that the teaching of certain math-related concepts and/or procedures was more pleasant to these students under the Career Education approach. No differences were identified in math achievement between the two groups. Therefore, it was assumed that significant gains in achievement were not made by the preferred method of teaching. However, one year is hardly sufficient to indicate whether this might be the case if the attitude toward the subject were maintained at a high level. Typically, mathematics, under the Career Education approach, can be easily integrated into other academic areas and approached from the viewpoint that math is a tool to be used in one's work. It would be quite possible that a natural lag would occur between the time when attitude improves and potential gains in achievement would occur.

Considering eighth grade, one significant difference was observed for sex. The females had a higher attitude toward reading. No significant differences in attitude were found between the Career Education and the Non-Career Education groups. However, the Career Education group did exhibit higher attitudes on four of the six subscores.

One important attitude difference was, however, found for eleventh grade students. The Career Education group had a significantly higher "Attitude Toward School." In addition, their "Attitude Toward Classmates" approached the .05 level of significance, with a probability level of .066.

Although attitude could be expected to change more quickly than acheivement levels, one school year might be too short a time to truly test this hypothesis.

Career Maturity

Career maturity scores were obtained through the use of the Career Maturity Inventory (CMI). The test yielded six subscores: self-appraisal, knowledge of occupations, goal selection, planning, problem solving, and an attitude score. Scores were obtained on a sample of sixth, eighth, and eleventh grade students.

For the sixth grade sample, no significant differences were found on any subscores between males and females. However, two significant differences were found between the Career Education and the Non-Career Education groups. The Career Education group scored higher on the subscores dealing with occupations and for the maturity level regarding career planning. It could, therefore, be concluded that the Career Education program, as implemented at the sixth grade level, contributed significantly to positive gains in student knowledge of occupations and in career planning. The remaining four scores were not significantly different, but the Career Education group did achieve higher scores in all cases.

The Career Education approach did not seem to have much influence during the school year in academic achievement and attitudinal areas, but it did make a difference in two vocational maturity areas. This was where differences could really be expected to emerge, given the relatively short time span of the project. Perhaps in later years even more differences would be noted.

The CMI was also administered to a sample of eighth grade students. Two significant differences were observed between males and females. The girls were significantly higher in self appraisal (knowing yourself) and for the attitude score.

More important to this study were the significant differences found between groups. The Career Education students scored higher for career planning and on the attitude scale. Most other scores were also higher in the Career Education group, but not significantly higher. As was the case with fourth graders, it appeared that the Career Education program had an effect on the Career Maturity levels of the participating students.

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For eleventh grade students, two sex differences were identified. As was the case with the eighth grade students, the girls were higher on self appraisal and attitude toward career planning. However, no significant differences were found between the groups of Career Education and Non-Career Education students. Apparently, the high school programs were not as effective in modifying the Career Maturity of students. In explanation of this, it might be assumed that the high school programs were not as oriented to Career Education as the elementary and junior high programs. Also, the number of teachers with whom secondary students came in contact was much greater.

Overall, it was concluded that the Career Education group displayed higher Career Maturity levels than did the Non-Career Education group.

Motivation

The JIM Scale was administered as a measure of motivation. The pretest-posttest design was again utilized for eighth grade and eleventh grade students. No significant differences were found, either for sex or for group. The most obvious pattern which could be identified was a rather consistent decrease in scores from pretest to posttest. The posttest was administered near the end of the year. It may be that the students were more optimistic about school early and worn out at the end. Possibly, it could be expected that the level of motivation would be lower at the end of the year. However, analysis of the pretest and posttest means revealed that the motivation level of the Career Education group did not drop as much as those of the Non-Career Education group; in fact, for eleventh grade students, their posttest score was slightly higher than the pretest.

Absenteeism

Only the sample of eleventh grade students was considered in this analysis. It was hypothesized that absenteeism at the lower grades would not be related to type of program to the extent that it would be at the secondary level, a point where the student may have a greater choice as to whether or not he would attend school. Tenth grade absenteeism was used as the pretest value.

No significant differences were found in the days absent between males or females, or between the groups. However, the Career Education group missed somewhat fewer days, but not significantly fewer. The Career Education program appeared to have only little effect on absenteeism.

Occupational Aspiration

The Occupational Aspiration Scale (OAS) was used to collect data from a sample of tenth grade students. Pretest data were collected in the spring of 1973 and posttest data in the spring of 1974. Males and females were found to have similar aspiration levels. Likewise, Career Education and Non-Career Education students had similar aspirations, although both groups were somewhat lower at posttest.

In summary, the findings tended to support the Career Education group, although one year was a somewhat short time upon which to base such an assumption. On the average, their achievement was somewhat better, but only one subtest was significant -- math for the eighth grade. They also had slightly better attitude scores, with significantly higher scores on three subtests. The Career Education group also displayed a higher level of Career Maturity, a bit better motivation level, and missed fewer days of school. It was significant to find that the Career Education program didn't "hurt" students academically as some had hypothesized. Rather, their achievement and attitudes improved.

Recommendations

1. Student data be gathered over a longer period of time.
2. The findings from this study be disseminated throughout the Commonwealth.
3. Based on the results of this and other studies, Career Education be recommended for implementation.
4. Guides be developed to assist schools in implementing the Career Education concept.

Project Management Component

Data were collected relative to project management in an effort to identify successful practices which could be used in implementing like programs. Personal interviews were conducted with the Regional Career Education Staff, System Career Education Coordinators, and teachers.

All evidence collected indicated that the project managers had fulfilled their stated objectives efficiently and effectively. The goals of the project were clarified and understood by the teachers. This clarification of goals was accomplished by the administrative staff through a conscious effort in many meetings -- orientation, in-service and workshops -- and in daily contacts. Especially effective were planned efforts to clarify goals separately with different groups, i.e., superintendents with superintendents, principals with principals, etc. This enabled the participants to deal with their special role-related concerns with their peers. Communication was, therefore, not a barrier.

Another very effective effort was the assistance to teachers given by the regional staff and system coordinators. Commitments were made to visit teachers periodically and on call. This was done. It appeared to give the teachers a sense of security that help was there if they needed it. The interviews produced such comments as, "They came when I called," "He provided real help," and "Knowing they were available for assistance was a comfort."

The provision for training which enabled teachers to develop their own materials for classroom use was also an effective technique. Having teachers develop their own materials had two distinct advantages. First, it assured teachers of having materials when they needed them, therefore, they were not subject to a need for materials which weren't available. Second, developing their own materials appeared to give teachers a feeling of identification with the materials as being their own.

The staff also encouraged the systems to cooperate through sharing teachers with expertise as well as exchanging materials. Staff members from one district would serve as a consultant to another district.

All in all, the evaluation of the Project Management Component was very positive. The regional staff did a very commendable job, especially when considering the number of counties, districts, and schools involved.

Recommendations

In developing similar projects, the following recommendations were presented:

1. Seek to develop full understanding of the project, its values, procedures, difficulties and necessary actions, with an orientation program for all participants.
2. Deliberately seek specific commitments from all levels of participants.
3. Develop a program of practical, usable training for all participants, including follow-up.
4. Set an early precedent of providing support, encouragement, and reinforcement for the participants' efforts.

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APPENDIX A

CAREER EDUCATION QUESTIONNAIRE FOR KEY EDUCATORS IN THE HAZARD REGION

CAREER EDUCATION QUESTIONNAIRE FOR KEY EDUCATORS IN THE HAZARD REGION

1. Does your school have a policy on career education? _____Yes _____No

(If answer is yes, please attach a copy)

Comment:

2. Have you had any articles on career education in the local paper?

Number of articles _____
Estimated column inches _____
Since September has the coverage:
Increased? _____
Decreased? _____
Stayed the same? _____

(If available, please attach copies of recent news coverage)

Comment:

3. Regarding public interest in career education, do you think: (check one)

More is needed? _____
Less is needed? _____
It is about right? _____

Comment:

4. Regarding local radio/TV coverage of career education do you feel that: (check one)

More is needed? _____
Less is needed? _____
It is at about the right level? _____

For questions 5 and 6, please circle the response which best answers the question.

(SA = Strongly Agree, A = Agree, U = Undecided, D = Disagree, SD = Strongly Disagree.

5. Resource people in the community:

SA A U D SD - are generally available when needed
SA A U D SD - are used in career education classes
SA A U D SD - are helpful in implementing the career education concept

6. Parents in the community:

SA A U D SD - are involved in career education
SA A U D SD - are in favor of career education
SA A U D SD - don't know much about career education

Comment:

7. Check any of the following means you have used in securing resource personnel for your school.

_____ telephone contacts
_____ community survey
_____ students write request letters
_____ teachers invite personally
_____ teachers write request letters
_____ requests from the principal
_____ requests from the superintendent
_____ other (explain) ____

8. Follow-up of resource personnel used in your school include (check any that apply

_____ a letter to the speaker
_____ a letter to the employer of the resource person
_____ recognition dinner for resource persons
_____ other (Explain) ____
____

9. Are advisory committees used in your school? If so, what type? (Check any that apply)

_____ special advisory committee for career education
_____ advisory committees for programs other than career education (explain)
____
____

_____ craft advisory committees
_____ advisory committee for the total program
_____ informal advisory help from selected members of the community

Comment:

10. Rate the effectiveness of your advisory committee(s) (circle one)

Very effective
Moderately effective
Ineffective

Comment:

Thank you for completing the form. Although not required, it would be helpful if you would give the following information: (All returns will remain confidential.)

____
Name

____
Position

____
School

Please Return This Survey To:

M. J. Iverson, 15 Dickey Hall
Department of Vocational Education
University of Kentucky
Lexington, Kentucky 40506

APPENDIX B

PUBLIC AWARENESS OF CAREER EDUCATION
(PACE) QUESTIONNAIRE

PUBLIC AWARENESS OF CAREER EDUCATION (PACE) QUESTIONNAIRE

DIRECTIONS: READ EACH STATEMENT CAREFULLY AND DECIDE HOW YOU FEEL ABOUT IT. YOU ARE OFFERED FIVE POSSIBLE ANSWERS TO EACH STATEMENT. THE "UNDECIDED" ANSWER SHOULD BE CIRCLED ONLY WHEN YOU HAVE NO OPINION. PLEASE READ EACH STATEMENT AND CIRCLE THE ANSWER ON THE RIGHT:

SA if you strongly agree with the statement.
A if on the whole you would tend to agree.
U if you are undecided.
D if on the whole you would tend to disagree.
SD if you strongly disagree with the statement.

		Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1.	Career ("World of Work") Education is the same as Vocational Education.	SA	A	U	D	SD
2.	Career Education begins when children are ready to choose an occupation.	SA	A	U	D	SD
3.	The school counselor is important in setting up a Career Education program.	SA	A	U	D	SD
4.	A high school student should be prepared to enter a job after graduation.	SA	A	U	D	SD
5.	If given a choice of teachers, I want my children to have a teacher who practices Career Education.	SA	A	U	D	SD
6.	I would like to see more about Career Education in the newspapers.	SA	A	U	D	SD
7.	At the elementary level, Career Education should help children know more about different kinds of jobs.	SA	A	U	D	SD
8.	Career Education is a part of every school in our county.	SA	A	U	D	SD
9.	New rooms and equipment are needed in most schools to start a Career Education program.	SA	A	U	D	SD
10.	The superintendent and principal(s) in our school(s) believe that having a successful Career Education program is very important.	SA	A	U	D	SD
11.	The classes in our school help the children to make wise decisions about their careers.	SA	A	U	D	SD
2.	Students now know enough about future jobs to make sound career decisions.	SA	A	U	D	SD
3.	Practical experiences are necessary for a good Career Education program.	SA	A	U	D	SD
4.	People know about the Career Education program in our county.	SA	A	U	D	SD
5.	Our students know about the different amounts of money that can be earned in different kinds of jobs.	SA	A	U	D	SD
6.	Employers know about the Career Education program in our school(s).	SA	A	U	D	SD
7.	The teacher should be able to give students information about jobs.	SA	A	U	D	SD
8.	Work experience is an important part of Career Education.	SA	A	U	D	SD

19. Career Education is concerned with helping each student have a better feeling about himself and his own importance. SA A U D SD

20. Career Education is for those students who are not able to do the work in regular courses. SA A U D SD

21. Special emphasis in Career Education is aimed at helping the student do well in his career. SA A U D SD

22. Helping children know about jobs should be an important part of classes from kindergarten through grade six. SA A U D SD

23. Looking into different kinds of jobs should be made part of grades seven through nine. SA A U D SD

24. Career Education takes place from grade ten through college. SA A U D SD

25. Groups of citizens should be involved in planning Career Education programs. SA A U D SD

26. The major purpose of Career Education is to help young people learn how to make good (wise) choices that are made freely and on their own. SA A U D SD

27. Studying about jobs helps a student prepare for a good job. SA A U D SD

28. A Career Education program helps our students get along with others. SA A U D SD

Although it is not required, it will be very helpful if you will complete the following items: (Check the proper box or fill in the blank.)

What is your age?________

What is the highest grade you finished in school?_______

Are you ☐ Male? ☐ Female?

What is your race? ☐ White ☐ Black ☐ Other______________________

Are you ☐ Married? ☐ Single? ☐ Divorced? ☐ Widow or Widower?

How many children do you have? _____

How many of your children are in school? _____

Is your family's gross income ☐ less than $3,000/year?

☐ $3,000 to $10,000/year?

☐ over $10,000/year?

Thank you for completing this survey. Please return it to:

M. J. Iverson
Department of Vocational Education
University of Kentucky
Lexington, Kentucky 40506

PUBLIC AWARENESS OF CAREER EDUCATION (PACE) QUESTIONNAIRE

DIRECTIONS: READ EACH STATEMENT CAREFULLY AND DECIDE HOW YOU FEEL ABOUT IT. YOU ARE OFFERED FIVE POSSIBLE ANSWERS TO EACH STATEMENT. THE "UNDECIDED" ANSWER SHOULD BE CIRCLED ONLY WHEN YOU HAVE NO OPINION. PLEASE READ EACH STATEMENT AND CIRCLE THE ANSWER ON THE RIGHT:

SA if you strongly agree with the statement.
A if on the whole you would tend to agree.
U if you are undecided.
D if on the whole you would tend to disagree.
SD if you strongly disagree with the statement.

	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1. Career ("World of Work") Education should be a separate course.	SA	A	U	D	SD
2. Schools prepare students for work.	SA	A	U	D	SD
3. Career Education should be part of all courses in the school.	SA	A	U	D	SD
4. Courses in high school should be grouped around similar kinds of jobs.	SA	A	U	D	SD
5. The school my children attend should have a Career Education program.	SA	A	U	D	SD
6. More TV and radio time should be given to the Career Education program in our county.	SA	A	U	D	SD
7. It is the school's job to teach students how to make wise job choices.	SA	A	U	D	SD
8. In teaching Career Education every class emphasizes what people do in their jobs.	SA	A	U	D	SD
9. Local citizens help plan and measure success of our Career Education programs.	SA	A	U	D	SD
10. Students help plan and measure success of our Career Education programs.	SA	A	U	D	SD
11. Parents' desires for their children are considered in preparing the local school program of courses.	SA	A	U	D	SD
12. Career Education is more important for boys than girls.	SA	A	U	D	SD
13. Our teachers are prepared to teach in Career Education programs.	SA	A	U	D	SD
14. Our students have the chance to compare their abilities, interests and needs with the requirements of various types of jobs.	SA	A	U	D	SD
15. Parents know about Career Education activities which happen in the school.	SA	A	U	D	SD
16. Career Education helps students learn about and choose a job.	SA	A	U	D	SD
17. The major purpose of Career Education is to help young people discover their own interests and abilities.	SA	A	U	D	SD

18. Career Education for girls should be to prepare for a job as a secretary, nurse or teacher. SA A U D SD

19. Career Education helps students know about their own interests and abilities. SA A U D SD

20. Career Education is meant for all students in a school. SA A U D SD

21. Workers from business and industry can be valuable sources of information about jobs for the Career Education program. SA A U D SD

22. The major purpose of Career Education is to help young people look into the many ways to earn a living that would be interesting and fulfilling. SA A U D SD

23. Career Education helps students develop good attitudes toward work. SA A U D SD

24. Future teachers who are finishing college should be ready to teach Career Education. SA A U D SD

25. It is important that parents help plan Career Education programs. SA A U D SD

26. Helping students get a job is an important part of any Career Education program. SA A U D SD

27. Finding out what former students are doing is an important part of any Career Education program. SA A U D SD

28. School programs should help get people ready for work. SA A U D SD

Although it is not required, it will be very helpful if you will complete the following items: (Check the proper box or fill in the blank.)

A. What is your age? _____

B. What is the highest grade you finished in school? _____

C. Are you ☐ Male? ☐ Female?

D. What is your race? ☐ White ☐ Black ☐ Other ________________

E. Are you ☐ married? ☐ Single? ☐ Divorced? ☐ Widow or Widower?

F. How many children do you have? _____

G. How many of your children are in school? _____

H. Is your family's approximate gross income ☐ less than $3,000 per year? ☐ $3,000 to $10,000 per year? ☐ over $10,000 per year ?

Thank you for completing this survey. Please return it to:

M. J. Iverson
Department of Vocational Education
University of Kentucky
Lexington, Kentucky 40506

APPENDIX C

TEACHER QUESTIONNAIRE

HAZARD CAREER EDUCATION PROJECT

TEACHER QUESTIONNAIRE

HAZARD CAREER EDUCATION PROJECT

NAME______________________ SCHOOL___________________ DISTRICT________________

1. Sex: ___male ___female 2. Age_____ 3. ____years teaching experience

4. ____years in full-time employment outside of education

5. Grade(s) primarily taught: ____K-3 ____4-6 ____7-9 ____10-12

6. Subject primarily taught: ____
(Specify subject, e.g., agriculture, math, business & office, social studies, etc.)

7. Did you participate in the 1973 summer career education workshop? Check one:
___no ____yes (Hazard) ____yes (Jackson)

SECTION II

DIRECTIONS: Answer the following by rank ordering the responses to each question, one (1) being highest. If you have not done some of the activities, respond according to where you feel the activity would rank. Give each blank a number from 1 to n.

EXAMPLE: Rank order the following activities in terms of which was the most to least interesting to your students.
_3_Lectures
_1_Field trips
_2_Class projects
____Other ____
(Please specify)

8. Rank order the following in terms of who was the most to least effective in increasing your knowledge and understanding of Career Education.
____Other teachers in your system
____State Department personnel
____Regional office Career Education staff from Hazard
____Your system's Career Education coordinator
____Teachers from other schools
____University faculty
____Out-of-state consultants
____Other ____
(Please specify)

9. Rank order the following activities in terms of which was most to least effective in increasing your knowledge and understanding of Career Education.
____In-service programs in your school
____Summer workshops
____Career Education Conferences (sponsored by the regional staff in Hazard)
____University courses
____Professional meetings
____Reading professional literature
____Other ____
(Please specify)

10. Rank order the following activities in terms of which you felt was the most to least effective method of conveying Career Education concepts to your students.
____Resource people in your class
____Teaching Career Education units
____Field trips
____Class projects
____Utilizing Career Education related example or methods to supplement regular academic material
____Other ____
(Please specify)

11. Rank order the following in terms of which was the most to least effective method of securing the services of a resource person for your class.
____Letters sent by you
____Letters sent by students
____Telephone contact by you
____Telephone contact by students
____Personal contact by you
____Personal contact by students
____Arrangement by your administrator
____Other ______________________________
(Please specify)

12. Rank the following in terms of their effectiveness in motivating students.
____Hands-on class projects
____Bulletin boards
____Career corners
____Doing research and written reports on occupations
____Resource persons
____Field trips
____Group work
____Films and filmstrips
____Role playing
____Teacher enthusiasm for Career Education
____Other ______________________________
(Please specify)

13. Rank the following in terms of which you feel is the most to least important determiner of program success in Career Education.
____In-service education for teachers prior to implementation
____Availability of already prepared instructional materials
____Administrative support
____Special facilities
____Parental and community support
____Continued leadership from a source such as the regional Career Education staff from Hazard
____Other ______________________________
(Please specify)

SECTION III

14. Have you involved parents in your Career Education program?
____yes If yes, how?______________________________
____no ______________________________

15. ____How many field trips did your class(es) take this past year?
(Number)

16. ____How many resource persons visited your class?
(Number)

17. On a scale of 1 to 5, 1 being highest and 5 being lowest, rate the extent to which each of the following (in your opinion) is knowledgeable of Career Education. (circle one)

	←HI Knowledge			LO Knowledge →	
Parents	1	2	3	4	5
Community at large	1	2	3	4	5
Teachers (as a total group)	1	2	3	4	5
Administrators (as a total group)	1	2	3	4	5
Counselors (as a total group)	1	2	3	4	5
Participants in the summer workshop	1	2	3	4	5
Regional Career Education staff from Hazard	1	2	3	4	5
Teachers in your school	1	2	3	4	5
Your principal	1	2	3	4	5
Your counselor	1	2	3	4	5
You	1	2	3	4	5

18. On a scale of 1 to 5, 1 being highest and 5 being lowest, rate how favorable an attitude you feel each of the following has toward Career Education. (Circle one)

	←HI Attitude			LO Attitude →	
Parents	1	2	3	4	5
Community at large	1	2	3	4	5
Teachers (as a total group)	1	2	3	4	5
Administrators (as a total group)	1	2	3	4	5
Counselors (as a total group)	1	2	3	4	5
Participants in the summer workshop	1	2	3	4	5
Regional Career Education staff from Hazard	1	2	3	4	5
Teachers in your school	1	2	3	4	5
Your principal	1	2	3	4	5
Your counselor	1	2	3	4	5
You	1	2	3	4	5

SECTION IV

19. What was the most rewarding experience you encountered in working with your students and Career Education?

20. Please name two (2) of the most significant problems you encountered in implementing Career Education.

a.

b.

21. What techniques or procedures did you use to overcome each of the above problems? If not overcome, how might you suggest that each be overcome?

a.

b.

22. The following list represents potential problems to the success of Career Education. Indicate the extent to which it affected your situation.

a.	Obtaining quality resource people	No Problem	Little	Some	Much
b.	Knowledge of places to visit	No Problem	Little	Some	Much
c.	Organizing for a field trip	No Problem	Little	Some	Much
d.	Having sufficient funds to purchase materials	No Problem	Little	Some	Much
e.	Having sufficient funds to take field trips	No Problem	Little	Some	Much
f.	Having sufficient facilities to conduct Career Education activities	No Problem	Little	Some	Much
g.	Availability of appropriate Career Education materials for students	No Problem	Little	Some	Much
h.	Availability of Career Education materials for you	No Problem	Little	Some	Much
i.	Being able to interest your students in Career Education concepts	No Problem	Little	Some	Much
j.	Being able to evaluate your students' growth in Career Education	No Problem	Little	Some	Much
k.	Other teachers accepting the concepts of Career Education	No Problem	Little	Some	Much
l.	Other teachers being willing to move toward Career Education	No Problem	Little	Some	Much
m.	Your ability to integrate Career Education into the existing curriculum	No Problem	Little	Some	Much
n.	Your feeling of confidence when teaching a Career Education unit	No Problem	Little	Some	Much
o.	Availability of sufficient individual planning time	No Problem	Little	Some	Much
p.	Availability of sufficient in-service training programs	No Problem	Little	Some	Much
q.	Availability of school time for speakers and field trips	No Problem	Little	Some	Much
r.	Finding resource people with time to come to school and speak to your students	No Problem	Little	Some	Much
s.	Availability of sufficient time to plan with other teachers	No Problem	Little	Some	Much
t.	Teachers being involved in decisions about Career Education	No Problem	Little	Some	Much
u.	Class size too large to achieve Career Education objectives	No Problem	Little	Some	Much
v.	The extent to which differing student interests and aptitudes affected your program	No Problem	Little	Some	Much
w.	Achieving Career Education objectives and also achieving academic objectives	No Problem	Little	Some	Much
x.	Negative opinions about Career Education by other faculty or administration	No Problem	Little	Some	Much
y.	Arranging for the continuation of Career Education for next year	No Problem	Little	Some	Much
z.	Not completing Career Education objectives because of the need to complete other important school objectives	No Problem	Little	Some	Much

APPENDIX D

OCCUPATIONAL ASPIRATION SCALE (OAS)

(ABOUT YOU AND YOUR PLANS)

ABOUT YOU AND YOUR PLANS

Name________________________ School________________________

Sex: Boy____ Girl____ Age ___

THIS SET OF QUESTIONS CONCERNS YOUR INTEREST IN DIFFERENT KINDS OF JOBS. THERE ARE EIGHT QUESTIONS. EACH ONE ASKS YOU TO CHOOSE ONE JOB OUT OF TEN PRESENTED.

READ EACH QUESTION CAREFULLY. THEY ARE ALL DIFFERENT.

ANSWER EACH ONE THE BEST YOU CAN. DON'T LEAVE OUT ANY. CHECK ONLY ONE RESPONSE FOR EACH QUESTION.

1. Of the jobs listed in this question, which is the BEST ONE you are REALLY SURE YOU CAN GET when your SCHOOLING IS OVER?

1.1 ☐ Lawyer
1.2 ☐ Welfare worker
1.3 ☐ United States representative in Congress
1.4 ☐ Career in Army
1.5 ☐ United States Supreme Court Justice
1.6 ☐ Night watchman
1.7 ☐ Sociologist
1.8 ☐ Police officer
1.9 ☐ County agricultural agent or home demonstration agent
1.10 ☐ Filling station attendant or hospital housekeeping aide

2. Of the jobs listed in this question, which ONE would you choose if you were FREE TO CHOOSE ANY of them you wished when your SCHOOLING IS OVER?

2.1 ☐ Member of the board of directors of a large corporation
2.2 ☐ Undertaker
2.3 ☐ Banker or teller in a bank
2.4 ☐ Machine operator in a factory
2.5 ☐ Physician (doctor)
2.6 ☐ Clothes presser in a laundry
2.7 ☐ Accountant for a large business
2.8 ☐ Airline steward or stewardess
2.9 ☐ Railroad engineer
2.10 ☐ Singer in a night club

3. Of the jobs listed in this question which is the BEST ONE you are REALLY SURE YOU CAN GET when your SCHOOLING IS OVER?

3.1 ☐ Neuclear physicist
3.2 ☐ Reporter for a daily newspaper
3.3 ☐ County judge
3.4 ☐ Barber or Beautician
3.5 ☐ State governor
3.6 ☐ Soda fountain clerk
3.7 ☐ Biologist
3.8 ☐ Mail carrier
3.9 ☐ Official of an international labor union
3.10 ☐ Farm Hand or Baby Sitter

4. Of the jobs listed in this question, which ONE would you choose if you were FREE TO CHOOSE ANY of them you wished when your SCHOOLING IS OVER?

4.1 ☐ Psychologist
4.2 ☐ Manager of a small store
4.3 ☐ Head of a department in state government
4.4 ☐ Clerk in a store
4.5 ☐ Cabinet member in the federal government
4.6 ☐ Janitor or housekeeper
4.7 ☐ Musician in a symphony or orchestra
4.8 ☐ Carpenter
4.9 ☐ Radio announcer
4.10 ☐ Coal miner

5. Of the jobs listed in this question, which is the BEST ONE you are REALLY SURE YOU CAN HAVE by the time you are 30 YEARS OLD?

5.1 ☐ Civil engineer
5.2 ☐ Bookkeeper
5.3 ☐ Minister, Priest, Missionary
5.4 ☐ Bus driver
5.5 ☐ Diplomat in the United States Foreign Service
5.6 ☐ Share cropper (one who owns no livestock or farm machinery, and does not manage the farm)
5.7 ☐ Author of novels
5.8 ☐ Plumber
5.9 ☐ Newspaper columnist
5.10 ☐ Taxi driver

6. Of the jobs listed in this question, which ONE would you choose to have when you are 30 YEARS OLD, if you were FREE TO HAVE ANY of them you wished?

6.1 ☐ Airline pilot
6.2 ☐ Insurance agent
6.3 ☐ Architect
6.4 ☐ Milk route delivery
6.5 ☐ Mayor of a large city
6.6 ☐ Garbage collector or dishwasher
6.7 ☐ Officer in the armed forces
6.8 ☐ Garage mechanic
6.9 ☐ Owner-operator of a printing shop
6.10 ☐ Railroad section hand

7. Of the jobs listed in this question, which is the BEST ONE you are REALLY SURE YOU CAN HAVE by the time you are 30 YEARS OLD?

7.1 ☐ Artist who paints pictures that are exhibited in galleries
7.2 ☐ Traveling salesperson for a wholesale concern
7.3 ☐ Chemist
7.4 ☐ Truck driver
7.5 ☐ College professor
7.6 ☐ Street sweeper
7.7 ☐ Building contractor
7.8 ☐ Local official of a labor union
7.9 ☐ Electrician
7.10 ☐ Restaurant waiter or waitress

8. Of the jobs listed in this question, which ONE would you choose to have when you are 30 YEARS OLD, if you were FREE TO HAVE ANY of them you wished?

8.1 ☐ Owner of a factory that employs about 100 people
8.2 ☐ Playground director
8.3 ☐ Dentist
8.4 ☐ Lumberjack
8.5 ☐ Scientist
8.6 ☐ Shoeshiner or manicurist
8.7 ☐ Public school teacher
8.8 ☐ Owner-operator of a lunch stand
8.9 ☐ Trained machinist
8.10 ☐ Dock worker

☐☐ Total Score

APPENDIX E

INTERVIEW GUIDE FOR RECIPIENTS OF MANAGEMENT SERVICES

INTERVIEW GUIDE FOR RECIPIENTS OF MANAGEMENT SERVICES

1. Were goals clarified for you?

    a. what was done, how, who involved, results?

ORIENTATION

COMMUNICATION
SYSTEM

MATERIAL
DEVELOPMENT

OPERATIONAL
SERVICES

Effective Practices:

Ineffective Practices:

2. Were adequate resources, material and human, provided?

   a. what was done, how, who involved, results?

ORIENTATION

COMMUNICATION SYSTEM

MATERIAL DEVELOPMENT

OPERATIONAL SERVICES

Effective Practices:

Ineffective Practices:

3. Were you provided adequate help in producing, using and evaluating materials and procedures?

   a. what was done, how, who involved, results?

ORIENTATION

COMMUNICATION SYSTEM

MATERIAL DEVELOPMENT

OPERATIONAL SERVICES

Effective Practices:

Ineffective Practices:

4. Were you provided sufficient help when you encountered problems?
    a. what was done, how, who involved, results?

ORIENTATION

COMMUNICATION
SYSTEM

MATERIAL
DEVELOPMENT

OPERATIONAL
SERVICES

Effective Practices:

Ineffective Practices:

APPENDIX F

SAMPLE CAREER EDUCATION POLICY STATEMENTS FROM LOCAL DISTRICTS

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REGION XII

SYSTEM

KNOTT COUNTY

DATE

5 JULY 1973

SCHOOL (IF APPROPRIATE)

HINDMAN ELEMENTARY

NAME

Simon FIELDS

TITLE (SUPERVISOR, PRINCIPAL, LIBRARIAN, GUIDANCE COUNSELOR, ETC)

PRINCIPAL

MY PLANS FOR CAREER EDUCATION, FROM JULY 1, 1973 - DECEMBER 1, 1973:

Terminal Performance Objective

Teachers and pupils in the Hindman Elementary School will indicate an awareness of Career Education during 1973-74 as defined and outlined during the LEA in-service workshop by demonstrating some tangable form of C.E. learning in the school, home or community.

Enabling Objective # 1

Teachers and pupils in the Hindman Elementary School may develope and execute classroom units of learning as opportunities permit in fusion with normal classroom activity in one or more job clusters as identified by the office of USOE.

Enabling Objective # 2

Teachers and pupils in the Hindman Elementary School may integrate into their subject matter world-of-work during normal classroom activity to the extent that every pupil will be aware of one or more occupational tasks in the world of work.

General Plans

1. Have each teacher attend a basic C.E. orientation during a county-wide in-service workshop before the school year class work begins.

2. As Principal, followup on this workshop with each teacher throughout the year to ensure that they understand the basic objectives with emphasis on the needs of their pupils.

3. Advise parents by appropriate media that the school is instituting a new program with emphasis on the world-of-work, and give them a brief overview of the C.E. general objectives and goals.

4. Personally visit each classroom during the first semester and give an introductory presentation about the world-of-work, suggesting that it might be a new and interesting way of learning in the school.

Specific Plans

1. Support and encourage each teacher in every way possible to incorporate Career Education projects and activities into their curriculum, to include:

A. Providing funds for necessary raw materials and equipment for pupils to use in their projects, particularly;

(1) The purchase of a camera, film and flashbulbs, etc.
(2) Telephone materials for use in the Communications Unit to be taught by a fifth grade teacher.
(3) Newspaper materials for use in the Journalism Unit to be # taught by a Reading teacher.
(4) Bulletin Board material and space.

MY PLANS FOR CAREER EDUCATION, FROM JULY 1, 1973-DECEMBER 1,1973.

B. Arranging Field Trips for pupils engaged in C.E. Units, particularly:

(1) A field trip to the local telephone office and exchange for those in the communications unit.
(2) A field trip to the local newspaper office for those in the journalism unit.

C. Arranging for Community Resource People to come into the school to be interviewed and/or for demonstration purposes, particularly:

(1) Have Mr. Bob Thacker visit for an interview and arrange for a telephone lineman demonstration for pupils in the communications unit.

(2) Have Mrs. Irene Cornett of the Knott County News come to the school for an interview in the journalism unit.

D. Provide flexible scheduling of class periods and plant spaces to facilitate unit activities.

E. Provide ample opportunity for orientation of all teachers (and pupils) with a view toward creating interest, motivation and learning of content of career education concepts, to include:

(1) Observation of units in progress.
(2) Assembly programs for skits and plays.
(3) Role playing
(4) A two-hour teacher orientation period prior to the county-wide in-service workshop.
(5) A two-day system-wide workshop as followup on the Hazard workshop.
(6) Faculty meetings featuring C.E. topical content.
(7) Classroom visits from the principal, and presentations as necessary.
(8) Daily announcements from the principal in regard to on-going units.

F. Involve the Community, Home and Church with each unit/activity to the maximum extent possible by:

(1) Special invitation to visit and observe on-going work.
(2) Use of the camera to film activities for release to the local press, particularly field trips (hands-on) experiences, interviews, and assemblies in connection with the communications and journalism units to be taught.
(3) Specifically invite the local school Board Member to observe in order to ensure that she is kept well informed.

G. Set up dates for 12th District Regional Staff to Visit and arrange activities accordingly, to include necessary followup and correction of discrepancies and/or derogatory items noted.

H. Provide some free time for individual teacher planning and for group get-togethers for discussing mutual problems, particularly:

(1) Ask permission to dismiss school one hour early about one day

(2) Provide substitute teachers (teacher aides, student aides, principal, parent,etc,) for individual planning time.

I. Assist and support the librarian to set up a Career Lab wherein various resource material will be available to teachers and pupils, to include books, materials, and filmstrips.

J. Integrate/fuse C.E. concepts into the on-going Speech Club activities as another means to provide maximum coverage about the world-of-work.

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I. Philosophy

The responsibility of our school is to the child. The school is fundamentally an institution maintained by society to do a specific work, to exercise a certain function in advancing the welfare of society. A basic concept of the schools program is the belief that every individual (of all ages and levels) have a right to set for themselves the way of life and work they'll take part in during their life ti time. If our educational system is to meet its responsibility it is necessary to develop every student to his fullest capacity. Every child should be recognised as a continously evolving individual in his ever changing level of skills and interest, all the time keeping in mind the necessity of the following five areas of development:

A. Socially
B. Mentally
C. Physically
D. Emotionally
E. Morally

II. Board of Education's Philosophy

The Jenkins Board of Education recognises the importance and the need of Career Education and will support its development and implementations within the framework of state regulations and the financial researces of the District.

III. System-Wide Plans

A. Teacher Orientation to Career Ed.

1. Two-day Inservice Program for all Teachers
2. Continuing In-Service through Teacher Meetings

B. Parent and Community Involvement and awarness of Career Ed.

1. Students will take part in field trips out to places of business.
2. Career people in the community will be brought into the class room for interviews.
3. Newspaper articles describing the Career Ed. Program.
4. Radio coverage on interviews made by students of people in different careers.
5. Talks will be made to community organizations and clubs.
6. Career day

C. To help students develop the social, intellectual and psychological competencies and attitudes which are essential for success in the world of work.

1. Group Sessions - with special attention to Human Relations, Self Concept and the worth of work.
2. Group and Individual Counseling on Interest Inventories, Aptitude, Achievement and Career Awarness.
3. Occupational Information Center.

IV. Plans by Schools

Principals of Jemison High School, McRoberts and [illegible] Elementary
Counselors Plan
Supervisors Plan
D. Teacher's Units prepared in the Summer Work-Shop
E. All teachers will be required to teach two units on Career Ed. within the [illegible] school year.
[illegible] will be required to make out a list of Career Ed. materials available.

The next few pages will contain the materials in part IV. of this plan.

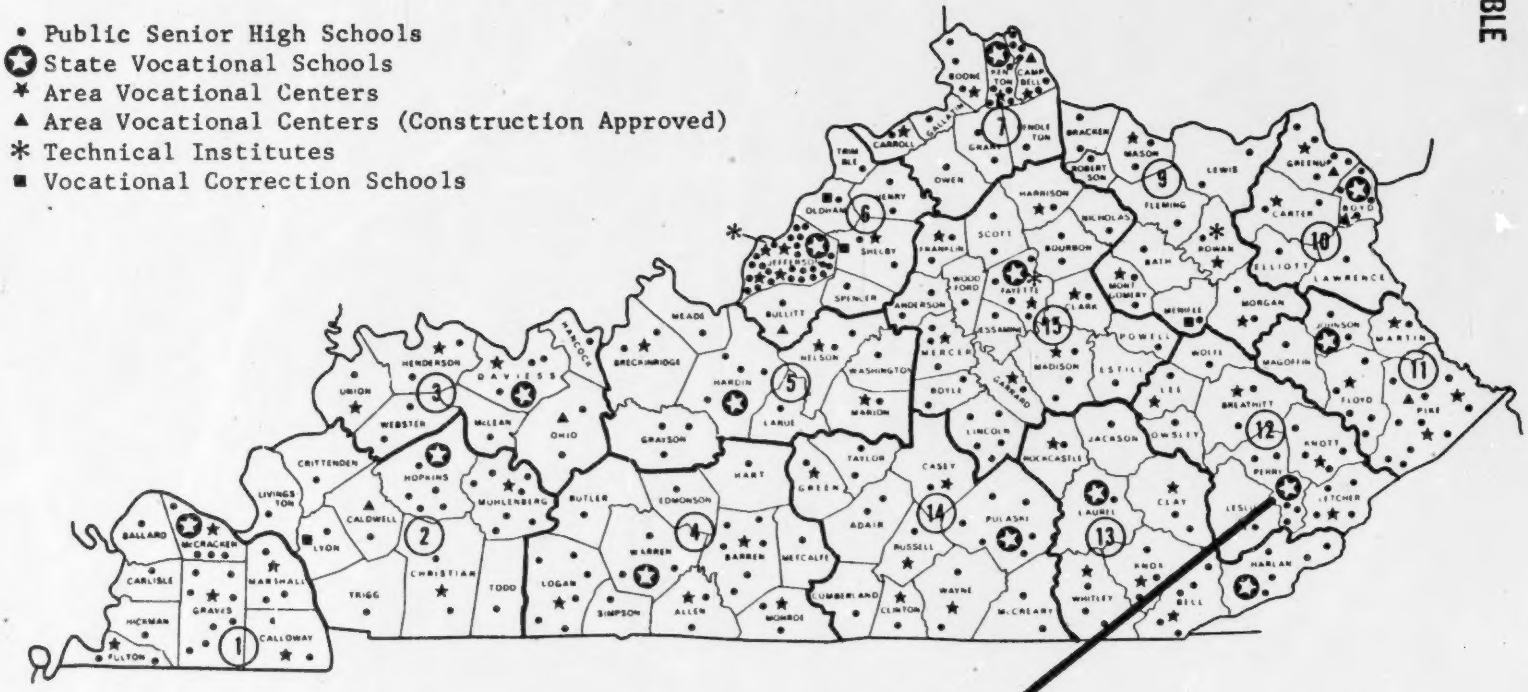
APPENDIX G

KENTUCKY'S REGIONAL EDUCATION STRUCTURE

KENTUCKY'S REGIONAL EDUCATION STRUCTURE

CODE: (Facilities Offering Vocational Programs, 1973-74)

- ● Public Senior High Schools
- ✪ State Vocational Schools
- ★ Area Vocational Centers
- ▲ Area Vocational Centers (Construction Approved)
- ✻ Technical Institutes
- ■ Vocational Correction Schools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BALLARD
McCRACKEN
CARLISLE
HICKMAN
FULTON
GRAVES
MARSHALL
CALLOWAY
LIVINGS TON
CRITTENDEN
LYON
CALDWELL
TRIGG
CHRISTIAN
TODD
UNION
WEBSTER
HENDERSON
HOPKINS
MUHLENBERG
DAVIESS
McLEAN
OHIO
HANCOCK
BUTLER
LOGAN
SIMPSON
WARREN
EDMONSON
ALLEN
BARREN
HART
METCALFE
MONROE
GRAYSON
BRECKINRIDGE
MEADE
HARDIN
LARUE
BULLITT
JEFFERSON
OLDHAM
TRIMBLE
HENRY
SHELBY
SPENCER
NELSON
WASHINGTON
MARION
CARROLL
GALLATIN
BOONE
KENTON
CAMPBELL
GRANT
PENDLETON
OWEN
FRANKLIN
SCOTT
WOODFORD
ANDERSON
MERCER
BOYLE
JESSAMINE
FAYETTE
HARRISON
BOURBON
NICHOLAS
BRACKEN
ROBERTSON
MASON
FLEMING
LEWIS
BATH
ROWAN
MONTGOMERY
MENIFEE
CLARK
MADISON
GARRARD
LINCOLN
ESTILL
POWELL
WOLFE
MORGAN
ELLIOTT
CARTER
GREENUP
BOYD
LAWRENCE
JOHNSON
MAGOFFIN
MARTIN
FLOYD
PIKE
BREATHITT
KNOTT
PERRY
LETCHER
LESLIE
HARLAN
LEE
OWSLEY
JACKSON
ROCKCASTLE
CLAY
LAUREL
KNOX
BELL
WHITLEY
McCREARY
PULASKI
WAYNE
CASEY
TAYLOR
GREEN
ADAIR
RUSSELL
CUMBERLAND
CLINTON

Hazard, Kentucky (Region XII)